Saskatchewan

A D F

Agriculture Development Fund

FINAL REPORT

19970291

TESTING OF FORAGE CROP CULTIVARS/SPECIES FOR ADAPTATION AND YIELD

Funded by
The Agriculture Development Fund

March 2002
Prepared by: Saskatchewan Forage Council

SAF
Saskatchewan Agriculture & Food

Adding value to agriculture...through research and development

Final Report of
The Saskatchewan Forage Council to
The Agriculture Development Fund

March 1, 2001

Testing of Forage Crop Cultivars/Species For Adaptation and Yield

Project No. 97000291

Res. 78BV

Coordinator: Randy Pastl

Acknowledgments

This project would not have been possible without funding support from the Agriculture Development Fund and the initiative of the Project Co-investigator Committee (B. Coulman, P. Jefferson, H.A. Lardner, E. Moats, E. Anaka, D. Pulkinen, A. Foster and B. Rossnagel). The Saskatchewan Forage Council (SFC) would like to thank Agriculture and Agri-Food Canada for their generous support of staff and equipment for this project. We also thank the Western Beef Development Center (WBDC) for providing affordable office space for SFC staff and the many Sask. Ag. and Food extensions Agrologists who help make this project a success. We would also like to thank the producer cooperators for the assistance we have received from them in the support of the program. In addition, a sincere thank you goes to Garth Lyons and Don Fuhrman for their assistance in plot maintenance at Nipawin and Netherhill respectively. I would also like to thank the East Central Research Foundation for their assistance with the research site at Canora. Michel Tremblay (SAF) and Bruce Coulman (AAFC) have been a very strong source of encouragement and support for this program and they should be recognized.

Special Acknowledgement: Neville Wohlberg (Forage Agronomist-SFC) and Janice Bruynooghe (Executive Director-SFC) who assisted with the editing and production of this final report. I would also like to thank all technicians from AAFC Linden McFarlane, Jim Nelson, and Russ Murri, and the SFC summer Staff- Mark vanHaastert, Jessica Morland, Brad Hvidston, Duane Hill, Andre Bonneau, Stacey Keyowski, Kerry Nell and Aaron Dietrich.

Acknowledgement of Herbicide Companies that contributed product for weed control during the course of this project:

Company	**Product**
Syngenta	Achieve 80 DG
Dow AgroSciences	Curtail M Prestige Prevail
Monsanto	Roundup Transorb
Aventis CropSceience	Puma Super
BASF Canada Inc.	Pursuit

Table of Contents

Acknowledgments ii
1. Executive Summary 1
1.1. Abstract 1
1.2. Impact on Saskatchewan Agriculture 3
1.3. Technology Transfer 3
1.4. Extension Activities 4
1.5. Personnel 4
1.6. Equipment 4
1.7. Deviation from Original Work Plan 4
1.8. Achievements 5
1.9. Site Establishment 5
1.10. Harvesting 5
1.11. Comments on Budget Table 1.3 10
2.0 Results 11
2.1 Netherhill 12
2.2 Nipawin 27
2.3 Tisdale 49
2.4 Canora 55
2.5 Melfort 81
2.6. Saskatoon 92
2.8 Outlook Irrigation 146
Appendix A 172

List of Tables

Table 1. 1 Newly Registered Alfalfa Varieties 7
Table 1. 2 Recently Registered Grasses and other Legumes 8
Table 1. 3 Budget April 1998- April 2002 9

Netherhill

Table 2.1. 1 Netherhill Alfalfa 2000 14
Table 2.1. 2 Netherhill Alfalfa 1999 15
Table 2.1. 3 Netherhill Alfalfa 1998 16
Table 2.1. 4 Netherhill Alfalfa 1995 17
Table 2.1. 5 Netherhill Clover 1999 18
Table 2.1. 6 Netherhill Clover 1998 19
Table 2.1. 7 Netherhill Bromegrass 1999 20
Table 2.1. 8 Netherhill Smooth Bromegrass 1995 21
Table 2.1. 9 Netherhill Orchardgrass 1998 22
Table 2.1. 10 Netherhill Timothy, Orchardgrass and Meadow Foxtail 1995 23
Table 2.1. 11 Netherhill Timothy 1998 24
Table 2.1. 12 Netherhill Crested Wheatgrass 1999 25
Table 2.1. 13 Netherhill Fescue and Ryegrass 1995 26

Nipawin

Table 2.2. 1 Nipawin Alfalfa 2000 30
Table 2.2. 2 Nipawin Alfalfa 1996 31
Table 2.2. 3 Nipawin Alfalfa 1995 32
Table 2.2. 4 Nipawin Clover 1999 33
Table 2.2. 5 Nipawin Clover 1998 34
Table 2.2. 6 Nipawin Clover 1995 35
Table 2.2. 7 Nipawin Cicer milk-vetch 1996 36
Table 2.2. 8 Nipawin Miscellaneous Grasses 1995 37
Table 2.2. 9 Nipawin Bromegrass 1999 38
Table 2.2. 10 Nipawin Smooth Bromegrass 1995 39
Table 2.2. 11 Nipawin Timothy 2000 40
Table 2.2. 12 Nipawin Timothy 1999 41
Table 2.2. 13 Nipawin Timothy 1998 42
Table 2.2. 14 Nipawin Timothy 1996 43
Table 2.2. 15 Nipawin Timothy, Orchardgrass and Meadow Foxtail 1995 44
Table 2.2. 16 Nipawin Crested Wheatgrass 1999 45
Table 2.2. 17 Nipawin Crested Wheatgrass 1997 46
Table 2.2. 18 Nipawin Orchardgrass 1998 47
Table 2.2. 19 Nipawin Fescue and Ryegrass 1995 48

Tisdale

Table 2.3. 1 Tisdale Alfalfa WFT 1997 50
Table 2.3. 2 Tisdale Dehy. Alfalfa 1999 51
Table 2.3. 3 Tisdale Dehy Alfalfa Trial 1998 52
Table 2.3. 4 Tisdale Alfalfa WFT 1998 53
Table 2.3. 5 Tisdale Alfalfa WFT 1999 54

Canora

Table 2.4. 1 Canora Alfalfa 1999 58
Table 2.4. 2 Canora Clover 1999 59
Table 2.4. 3 Canora Orchardgrass 1998 60
Table 2.4. 4 Canora Timothy 1998 61
Table 2.4. 5 Canora Westerwolds Ryegrass 1999 and 2000 62
Table 2.4. 6 Canora Alfalfa 1999 64
Table 2.4. 7 Canora Clover 1999 65
Table 2.4. 8 Canora Kentucky Bluegrass 1999 66
Table 2.4. 9 Canora Timothy 1999 67
Table 2.4. 10 Canora Crested Wheatgrass 1999 68
Table 2.4. 11 Canora Bromegrass 1999 69
Table 2.4. 12 Canora Italian Ryegrass Forage Yield 1998, 1999 and 2000 70
Table 2.4. 13 Canora Westerwolds Ryegrass Forage Yield 1998, 1999 and 2000 71
Table 2.4. 14 Canora Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000 72
Table 2.4. 15 Canora Wheat/Triticale Forage Quality 1998, 1999 and 2000 73
Table 2.4. 16 Canora Oat Green-feed Forage Yield 1998, 1999 and 2000 74
Table 2.4. 17 Canora Oat Forage Quality 1998, 1999 and 2000 75
Table 2.4. 18 Canora Barley Green-feed Forage Yield 1998, 1999 and 2000 76
Table 2.4. 19 Canora Barley Forage Quality 1998, 1999 and 2000 77
Table 2.4. 20 Canora Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000 78
Table 2.4. 21 Canora Alfalfa 2000 79
Table 2.4. 22 Canora Timothy 2000 80

Melfort

Table 2.5. 1 Melfort Barley Green-feed Forage Yield 1998, 1999 and 2000 83
Table 2.5. 2 Melfort Barley Forage Quality 1998, 1999 and 2000 84
Table 2.5. 3 Melfort Oat Green-feed Forage Yield 1998, 1999 and 2000 85
Table 2.5. 4 Melfort Oat Forage Quality 1998, 1999 and 2000 86
Table 2.5. 5 Melfort Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000 87
Table 2.5. 6 Melfort Wheat/Triticale Forage Quality 1998, 1999 and 2000 88
Table 2.5. 7 Melfort Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000 89
Table 2.5. 8 Melfort Westerwolds Annual Ryegrass Yield 1998, 1999, 2000 and 2001 90
Table 2.5. 9 Melfort Italian Ryegrass Yield 1998, 1999 and 2000 91

Saskatoon

Table 2.6. 1 Saskatoon Green-feed Forage Yield 1999. 2000 and 20001 95
Table 2.6. 2 Saskatoon Barley Green-feed Quality 1999 and 2001 96
Table 2.6. 3 Saskatoon Oat Green-feed Yield 1999, 2000 and 2001 97
Table 2.6. 4 Saskatoon Oat Quality 1999, 2000 and 2001 98
Table 2.6. 5 Saskatoon Wheat/Triticale Forage 1999 and 2001 99
Table 2.6. 6 Saskatoon Wheat/Triticale Forage Quality Table 1999 and 2001 100
Table 2.6. 7 Saskatoon Cereal Green Forage Summary Table 1999,2000 and 2001 101
Table 2.6. 8 Saskatoon Alfalfa 1996 102
Table 2.6. 9 Saskatoon Alfalfa 1997 103
Table 2.6. 10 Saskatoon Alfalfa 1998 104
Table 2.6. 11 Saskatoon Alfalfa 1999 105
Table 2.6. 12 Saskatoon Alfalfa 2000 106
Table 2.6. 13 Saskatoon Clover 1998 107
Table 2.6. 14 Saskatoon Clover 1999 108

Table 2.6. 15 Saskatoon Bird's-foot Trefoil 1996 109
Table 2.6. 16 Saskatoon Cicer milk-vetch 1996 110
Table 2.6. 17 Saskatoon Crested Wheatgrass 1997 111
Table 2.6. 18 Saskatoon Crested Wheatgrass 1999 112
Table 2.6. 19 Saskatoon Timothy, Orchardgrass and Meadow Foxtail 1995 113
Table 2.6. 20 Saskatoon Orchardgrass 1998 114
Table 2.6. 21 Saskatoon Timothy 1996 115
Table 2.6. 22 Saskatoon Timothy 1998 116
Table 2.6. 23 Saskatoon Timothy 1999 117
Table 2.6. 24 Saskatoon Timothy 2000 118
Table 2.6. 25 Saskatoon Kentucky Bluegrass 1999 119
Table 2.6. 26 Saskatoon Westerwolds Ryegrass 1999 and 2000 120
Table 2.6. 27 Saskatoon Italian Ryegrass 2001 121

Swift Current

Table 2.7. 1 Swift Current Alfalfa 1995 124
Table 2.7. 2 Swift Current Fescue and Ryegrass 1995 125
Table 2.7. 3 Swift Current Smooth Bromegrass 1995 126
Table 2.7. 4 Swift Current Timothy Orchardgrass and Meadow Foxtail 1995 127
Table 2.7. 5 Swift Current Alfalfa 1996 128
Table 2.7. 6 Swift Current Alfalfa 1997 129
Table 2.7. 7 Swift Current Bird's-foot Trefoil 1997 130
Table 2.7. 8 Swift Current Cicer milk-vetch 131
Table 2.7. 9 Swift Current Crested Wheatgrass 1997 132
Table 2.7. 10 Swift Current Alfalfa 1998 133
Table 2.7. 11 Swift Current Clover 1998 134
Table 2.7. 12 Swift Current Orchardgrass 1998 135
Table 2.7. 13 Swift Current Timothy 1998 136
Table 2.7. 14 Swift Current Westerwolds 1999 and 2000 137
Table 2.7. 15 Swift Current Alfalfa 1999 138
Table 2.7. 16 Swift Current Sainfoin 1999 139
Table 2.7. 17 Swift Current Red Clover 1999 140
Table 2.7. 18 Swift Current Bromegrass 1998 141
Table 2.7. 19 Swift Current Timothy 1998 142
Table 2.7. 20 Swift Current Kentucky Bluegrass 1999 143
Table 2.7. 21 Swift Current Crested Wheatgrass 1999 144
Table 2.7. 22 Swift Current Timothy 2000 145

Outlook

Table 2.8. 1 Outlook Alfalfa 1995 149
Table 2.8. 2 Outlook Alfalfa 1996 150
Table 2.8. 3 Outlook Alfalfa 1997 151
Table 2.8. 4 Outlook Alfalfa 1998 152
Table 2.8. 5 Outlook Alfalfa 1999 153
Table 2.8. 6 Outlook Alfalfa 2000 154
Table 2.8. 7 Outlook Fescues and Ryegrasses 1995 155
Table 2.8. 8 Outlook Smooth Bromegrass 1995 156
Table 2.8. 9 Outlook Timothy, Orchardgrass and Meadow Foxtail 1995 157
Table 2.8. 10 Outlook Red Clover 1998 158
Table 2.8. 11 Outlook Clover 1999 159
Table 2.8. 12 Outlook Bird's-foot Trefoil 1996 160
Table 2.8. 13 Outlook Cicer milk-vetch 1996 161

Table 2.8. 14 Outlook Crested Wheatgrass 1998 162
Table 2.8. 15 Outlook Crested Wheatgrass 1999 163
Table 2.8. 16 Outlook Timothy 1996 164
Table 2.8. 17 Outlook Orchardgrass 1998 165
Table 2.8. 18 Outlook Westerwolds 1999 and 2000 166
Table 2.8. 19 Outlook Timothy 1998 167
Table 2.8. 20 Outlook Timothy 1999 168
Table 2.8. 21 Outlook Timothy 2000 169
Table 2.8. 22 Outlook bromegrass 1998 170
Table 2.8. 23 Outlook Kentucky Bluegrass 1999 171

Tables Appendix A.

Table A. 1 Kindersley and Melfort Weather Data 173
Table A. 2 Nipawin and Saskatoon Weather Data 174
Table A. 3 Swift Current and Yorkton Weather Data 175
Table A. 4 Outlook Weather Data 176

1. Executive Summary

1.1. Abstract

The farm-gate value of forage crop production in Saskatchewan is approximately $415 million annually and contributes greater than 80% of the feed for the beef industry. Canada currently exports approximately 50% of its beef production. Between 1990 and 2000, the value of Canadian beef and cattle exports tripled to nearly $3 billion dollars (Beef Industry State of the Industry Fact Sheet, published by Saskatchewan Agrivision Corporation Inc.). The forage/beef industry is a well-established leader in the value-added sector of our Saskatchewan economy. By 2010, the beef cow herd in Saskatchewan is expected to increase by 50% with one million head of calves fed to market weight and 800,000 head slaughtered and processed to table-ready products within Saskatchewan (Beef Industry State of the Industry Fact Sheet, published by Saskatchewan Agrivision Corporation Inc.). This means that our current provincial forage acreage will have to increase by more than 50% to meet these projected goals. Forages are the foundation of the value-added livestock industry. Therefore, a reliable forage production system, utilizing new high-yielding, adapted forage cultivars, is essential for the expansion and sustainability of this important valued-added sector of our economy.

The objectives of this project were to continue to collect data on forage variety performance on previously established sites near Netherhill, Outlook, Swift Current, Saskatoon, Tisdale and Nipawin; to establish new trials at these sites each year to collect data on the relative yield performance of new perennial and annual forage cultivars for use by beef, sheep and dairy producers in Saskatchewan; and to provide regional extension Agrologist with sites for demonstrating varietal performance to local producer groups. Forage yield data was collected on alfalfa, fescue, perennial ryegrass, clovers, bromegrass, timothy, orchardgrass, meadow foxtail, cicer milk-vetch, crested wheatgrass, barley, wheat, oat, Triticale and annual ryegrass over eight locations in Saskatchewan.

Each year the data collected from these forage trials is submitted to the Saskatchewan Advisory Council on Forage Crops for review and evaluation. This Advisory Council is made up of provincial and federal government researchers, industry representatives and forage producers from across Saskatchewan. The Council determines if the forage cultivars in question have displayed sufficient adaptability and yield over a sufficient number of sites and years to warrant recommendation and/or registration as a new cultivar in Canada. Once a cultivar has been registered for forage production and seed is available for sale, the registered cultivar name along with the data collected through these trials is published in the "Saskatchewan Forage Crop Production Guide" published each year by Michel Tremblay (Forage Specialist – Sustainable Production Branch – SAF). The publication of the data, allows the producers of Saskatchewan to make informed decisions on the proper varieties that they should utilize within their farming operation. Forage cultivars are not listed in the Guide without first being tested for adaptation and yield under Saskatchewan growing conditions through the Western forage variety-testing program.

Since the beginning of this program more than 300 new unregistered forage cultivars of more than 20 perennial forage species have been evaluated for forage yield and adaptation within Saskatchewan. Of this number, greater than 60% have been deemed as not suitable for forage hay or pasture production under Saskatchewan growing conditions. When establishing a perennial forage stand the seed cost can be more than $35.00/acre depending on the crop species. As a result, this forage cultivar testing system has saved the forage producers of Saskatchewan millions of dollars in additional expense that would have been incurred with the use of inferior forage cultivars not adapted for use under Saskatchewan growing conditions. Because this forage cultivar testing system is a cooperative effort between the three Prairie Provinces and AAFC, time required to collect useful data on the adaptation and relative yield performance of new forage cultivars is reduced dramatically, ensuring that Saskatchewan producers have access to this information in a timely manner. The partnership between Sask. Ag and Food (SAF) SFC and Agriculture and Agri-Food Canada (AAFC) continues to result in excellent forage yield and adaptation data from several sites within Saskatchewan. In addition, the Saskatchewan forage research industry will have access to the data collected from Manitoba and Alberta to give a total of more than 17 forage sites across all three major soil zones each year. In turn, Saskatchewan taxpayers have saved thousands of dollars each year for the additional work that would have to be conducted without this strong partnership.

The SFC and its partners (SAF, AAFC and ADF) were able to provide yield and adaptation data that enabled the new hybrid bromegrass variety "AC Knowles" to be approved for production in Saskatchewan. The advantage of AC Knowles is that this cultivar is a hybrid between smooth brome (an extremely aggressive, creeping rooted, invasive species) and the less creeping rooted grazing-tolerant meadow brome species. Through the patience and efforts of Dr. Knowles and Dr. Bruce Coulman, (AAFC Saskatoon Research Station) a hybrid was developed that retains some of the higher yielding attributes of smooth bromegrass, but has less aggressive creeping rooted characteristics of meadow bromegrass. This is seen as a major breakthrough in the replacement of smooth bromegrass in the Saskatchewan forage landscape. This is only the beginning and each year new and improved hybrid brome grass cultivars are being tested and evaluated in this program.

An additional example of the benefits of this program is the release of Windsor and Oxley II cicer milk-vetch cultivars in 2000 and 2001 respectively. Cicer milk-vetch is a non-bloat causing legume, which is an excellent alternative to having alfalfa in a forage pasture stand. Cicer milk-vetch has excellent grazing tolerance characteristics and once established will remain in a forage stand to provide years of livestock productivity as well as fixing nitrogen, which can be utilized by the forage grass component of the stand. These new cultivars, one developed in the United States and the other developed at Lethbridge, Alberta, show vast improvements in establishment and forage yield over the old cicer milk-vetch variety Oxley. Oxley, is extremely hard to establish, which makes it unattractive to many producers. The release of these two cultivars will result in vast improvements in the productivity of our grazed pastures across Saskatchewan and Western Canada.

In 1995, several perennial ryegrass trials were established to evaluate new cultivars for use under Saskatchewan growing conditions. The plots were successfully established at all locations and our initial assessment of the cultivars was very promising. However, in the following spring of 1996 the perennial ryegrass plots failed to re-grow at a number of locations across Saskatchewan. It was later determined that almost all of the plots where this species was established in 1995 had winter killed, indicating the poor winter hardiness and adaptability of these forage cultivars. This would have proven to be an extremely costly error for a forage producer to seed down a large area of perennial ryegrass without being aware of the inferior attributes of these cultivars.

These are only a few examples of how this variety testing system has benefited the forage producers of Saskatchewan. For complete list of the new forage varieties that have been registered out of this program, refer to tables 1.1 and 1.2.

A look at all the tables indicates that in most cases, most of the forage yield is obtained in the first harvest. This is especially true for the dryer locations. In general, the alfalfa trials tended to produce the largest amount of forage biomass compared to other forage species. There were a large number of new cultivars that were tested over the past fours years, many of which have now been registered for use in Canada. Some of these, performed well and others did not. Please consult the data tables in this document for a detail account of variety performance. In many cases, you will need to know the test name or number. Please consult tables 1.1 and 1.2 for the names and test number of the newly registered varieties tested in these trials.

1.2. Impact on Saskatchewan Agriculture

Knowledge of the most productive cultivars/species will permit livestock producers to increase the productivity of forage fields, reducing feeding costs. Data on forage variety adaptation and production will allow extension agencies to make accurate, informed decisions regarding a large number of forage varieties. The 2001 Saskatchewan Forage Crop Production Guide (Saskatchewan Agriculture and Food publication) utilized forage information from the Forage Variety Testing Program to produce variety lists on both perennial and annual grasses and perennial legumes. Forage producers are able to select forage species and varieties, which will produce optimum forage, yield and quality for specified growing conditions and will consequently increase revenue. The addition of new genetic material to the testing program allows the evaluation of these new cultivars under Saskatchewan conditions and increases the forage database from which variety recommendations are made. In 1998, the Sask. Forage Council began collecting data on annual ryegrasses and cereals such as barley, oat and wheat through the funding provided by ADF. This data will help producers extend their grazing season and provide alternative forages to be used in crop rotations, increasing pest management options.

1.3. Technology Transfer

Copies of previous ADF reports have been handed out to various farm managers and extension personnel. ADF reports and other forage pamphlets are made available at various trade shows and seminars where the SFC booth is set up. The following is a list of extension activities for 2001/2002.

1.4. Extension Activities

Extension Activities in 2001/2002

	Location	Activities	Date
Sask. Forage Council extension Meeting	Weyburn	Presentation	January 2001
SAF Forage Research Working Group	Watrous	Report on Research Activities	June 2001
Crop Production Week	Saskatoon	Booth	January 2001
Saskatchewan Advisory Council on Forage Crops Meeting	Swift Current	Report on Research Activities	November 2001
Western Canadian Grazing Conference	Saskatoon	Booth	December 5 to 7, 2001
2002 Canadian Alfalfa and Forage Seed Conference	Winnipeg	Booth	January 19,to 22, 2002
SAF/SFC Forage Meetings	North Battleford and Swift Current	Booth and Presentation	January 29 to 31, 2002
Davidson Farmer Meeting	Davidson	Presentation	February 15, 2002
Newfield Seeds Farm Meeting	Nipawin	Attended	February 18, 2002

1.5. Personnel

One full-time coordinator worked 90% of their time on the variety-testing project along with one summer student for a four-month period in the summer. Some causal labor was required each year to assist with fall harvesting, field fertilization, soil sampling and data processing throughout the winter.

1.6. Equipment

No items valued at more than $500 were purchased with project funds.

1.7. Deviation from Original Work Plan

Quality assessment was to be conducted on the annual ryegrass samples collected from three years of the four years of the project. Each year of the study, quality samples were collected from the sites at Canora and Melfort. In the fall of each year, the samples were ground and placed in storage to await quality assessment in the fall of the fourth year. The SFC experienced a storage problem in the fourth summer of the research season and all the annual ryegrass samples were lost and could not be assessed for quality. .

1.8. Achievements

All harvesting and agronomy work is current and up to date. Soil samples were taken on every site and plots have been fertilized. This is the final report of a four-year forage variety-testing program funded by ADF, AAFC and SFC. Over the period of this program, forage yield data was collected on more than one hundred and forty forage trials throughout Saskatchewan. A summary of the current information available in annual ryegrass production and management has been prepared for distribution to producers. A copy of this summary will be included as a separated document attached to the report.

1.9. Site Establishment

Forage plots were seeded with a Hege 75 seeder at recommended seeding rates and row spacing in 1.3m by 6.6m (4' by 20') plots with four replications at a minimum of two sites in each of the major soil zones and one irrigated site.

All legumes were inoculated with the appropriate strain of bacteria at seeding. Prior to seeding, the plot area was fertilized at the rate of 100 lb./ac P_2O_5 and 75 lb./ac N. Emerging plots were either hand weeded or sprayed with appropriate herbicide to control weeds. In the fall of each year, plots were fertilized with 35 lb./ac P_2O_5, 100 lb./ac N, 25 lb./ac of S and 15 lb./ac K using a Valmar granular applicator.

In the year of establishment, data is collected on stand establishment and survivability to assess the adaptability of the new cultivars in question. Starting in the year following establishment and continuing on through the next three growing seasons, the plots are assessed for survivability which provides valuable data on the winter hardiness and capability of the forage stand to survive and compete with weedy species over a number of forage production years. During this time, the forage stand is harvested twice each growing season to assess the ability of the species/cultivars to produce maximum biomass yield for Saskatchewan forage producers. The data collected on the cultivars is compared to a recognized check variety for each species.

1.10. Harvesting

Plots were harvested with a Swift Machine Forage Plot harvester. Prior to each harvesting operation, the plots were trimmed to a uniform length. Cutting height was approximately 4 inches. In the first cut, alfalfa and legume plots are harvested between the late bud and 5 % bloom stage. Second cuts on alfalfa are taken at a similar stage of growth (although second growth can range from early bud to pod stage in a plot) when it is determined that the research plots will not be harmed by winter injury. This is standardized at approximately six weeks before the first killing ($-10^{O}C$) frost or immediately following such a frost. Due to distance and weather constraints, all tests at a site are generally harvested on the same day, based on the stage of growth of the alfalfa. The grasses are usually at the late head/ stage at this time, although individual species and varieties maybe slightly earlier or later maturing than others. The second harvest of grasses tends to be of mostly vegetative growth. After harvest and in late fall, the plots are trimmed to maintain uniform conditions on all varieties.

The annual cereal forage plots were harvest when the oat at each site was in the soft dough stage of development. This usually meant that the barley was in the mid-dough stage and wheat was in the late milk to very early dough stage. The harvest operation usually occurred in late July to mid-August each year.

The annual ryegrass was cut toward the end of July to the early part of August of each year. The target harvest development stage was just before the westerwolds annual ryegrass had headed out and before it could develop seed. Forage producers wishing to utilize this forage species should be aware that it is a prolific seed producer and has the potential to become a weeding species in subsequent years. To avoid field contamination with westerwolds ryegrass seed, the grass must be harvested, or grazed before viable seed is produced.

The total plot yields were recorded and sub-samples of selected replicated plots were collected, oven dried at 65-75^{O} C for 48 hours and re-weighed for dry matter using the following formula:

[Weight (oven-dried)/Weight (fresh)] x 100 = % dry matter

The dry matter figure is used in the calculation of forage yield. All forage yield information in this report is given on a dry matter basis. The forage yield in this report has been listed as kilograms per hectare (Kg/ha). However, the values in the tables can be easily converted to pounds per acre (lbs/acre) by dividing the value in the tables by the conversion factor of "1.12".

Forage samples were collected from each plot at harvest for forage quality evaluation using wet chemistry analysis. Wet Chemistry analysis is very expensive, but is one of the best ways to determine the quality of forages. Because of this high cost, forage quality samples were bulked within varieties within each location. Each year, species and location were kept separate as indicated in the quality tables contained herein.

Table 1. 1 Newly Registered Alfalfa Varieties

When looking through the data tables in this report for forage yield information on a particular variety, match the cultivar test number and/or name in the tables to the registered variety name. Consult the 2002, Saskatchewan Forage Crop Production Guide for variety descriptions. For more information, contact your SAF Extension Agrologist.

Alfalfa		
Newly Registered Varieties	**Test number/name**	**Western Forage Variety Test Year**
AgriMaster	PS96-21	1996
Atomic	DS 9315	1995
Magnum III Wet	Magnum III Wet	1995
Pickseed 30006	3006	1995
Quattro HR	Quattro HR	1997
Stockwell	DS 9313	1995
Survivor	BPR 66	1995
TMF 421	CW 2227	1995
True North	ABI 9141	1997
WL 252 HQ	93-136	1995
WL 324	92-31	1995
53Q60	Y53Q60	1997
53V08	53VO8;XAL54	1997
AC Grazeland Br	LIRD 4	1995
Proleaf	Proleaf	1997
Quattro HR	Quattro HR	1997
AC Longview	LSR 93-1	1994 (refer to 1998 report)
Hornet	DS 907	1995

Table 1. 2 Recently Registered Grasses and other Legumes

When looking through the data tables in this report for forage yield information on a particular variety, match the cultivar test number and/or name in the tables to the registered variety name. Consult the 2002, Saskatchewan Forage Crop Production Guide for variety descriptions. For more information, contact the Extension Agrologist for your area.

Newly Registered Varieties	Test number/name	Western Forage Variety Test Year
Bromegrass:		
AC Knowles (Hybrid Brome)	S9197	1994 (refer to 1998 report)
Radisson (Smooth Brome)	Radisson	1995
Clovers:		
California Ladino	California	1995
Sonja	Sonja	1995
Cicer milk-vetch:		
Windsor	UGG 1901	1996
Oxley II	LRC 93-1	1996
Bird's-foot Trefoil:		
AC Langille	UGG 1301	1996
Meadow Fescue:		
Ensign	Ensign	1996
Tall Fescue:		
Courtenay	Courtenay	1995
Meadow Foxtail:		
Dan	Dan	1995
Mountain	Mountain	1995
Timothy:		
AC Alliance	AC Alliance	1996
Grindstad	UGG 1703	1996
Joliette	SVTT 8407	1998
Tuukka	Tuukka	1995
Crested Wheatgrass		
AC Goliath	S-9240	1997
Oat		
Baler	S093806	1998-2001
Wheat		
Genesis	**Deregistered in 2000**	

2.0 Results

2.1 Netherhill

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
2000	Alfalfa	2001	2.1.1
1999	Alfalfa	2000	2.1.2
1998	Alfalfa	1999-2000	2.1.3
1995	Alfalfa	1996-1998	2.1.4
1999	Red Clover	2000	2.1.5
1998	Red Clover	1999-2000	2.1.6
1999	Bromegrass	2000-2001	2.1.7
1995	Bromegrass	1996-1998	2.1.8
1998	Orchardgrass	1999-2000	2.1.9
1995	Timothy, Orchardgrass and Meadow Foxtail	1997-1998	2.1.10
1998	Timothy	1999-2000	2.1.11
1999	Crested Wheatgrass	2000-2001	2.1.12
1995	Fescue and Ryegrass	1996-1998	2.1.13

Each year new forage variety trials are established at this site. When looking at the data for trials established after 1998, or for trials where there is less than three years of data, please use caution in the interpretation of the results. In general, three years of data are required before the results can be interpreted with confidence.

Refer to Table A.1 in Appendix A for a detailed listing of the average monthly temperature and monthly precipitation throughout the course of this project. In general, temperatures were normal over the four-year period. However, through the later part of the 2000-growing season and for the entire 2001-growing season precipitation was less than half of normal. This is reflected in the poor yields for 2001.

There was no new data on the 1999 and 1998 alfalfa trials to report (table 2.1.2 and 2.1.3).

Over the three-year period of 1996 to 1998, 3B21, ABI 9136 and LIRD 4 (AC Grazeland Br) out yielded beaver by 10, 10 and 6 percent respectively (table 2.1.4). This trial was abandoned in 1999.

The clover trials did not produce adequate forage biomass regrowth to justify harvesting in 2001 (table 2.1.5 and 2.1.6).

Radisson smooth bromegrass, showed a slight yield advantage of 3% over Carlton smooth bromegrass at the end of the three-year study (table 2.1.8). This trial was abandoned in 1999.

The timothy and orchardgrass trials indicate that these species, although not very well adapted to the brown soil climatic zone, have done surprisingly well considering the dry conditions. However, it is unlikely that these trials will last for many more years (tables 2.1.9, 2.1.10 and 2.1.11). Due to poor regrowth and survival, this trial was abandoned in 1999.

Over the past two growing seasons, Kirk crested wheatgrass yielded 118 and 150% of the 2 new cultivar lines Vavilov and Douglas by, respectively (table 2.1.12).

The data from the fescue and ryegrass trial that was established in 1995 indicates that the perennial ryegrasses lines that were established here were not at all adapted to the dry-land growing conditions at this site. At the start of the 1995 growing season, the perennial ryegrasses established very well. However, the plants were not able to withstand the cold winter temperatures on 1996 and winterkilled. The fescues did establish well and produced forage from 1996 to 1998 (table 2.1.13). Courtenay tall fescue out-yielded experimental tall fescue lines MCF 101, UGG 1501 and Retu by 18, 27 and 28%, respectively.

Table 2.1. 1 Netherhill Alfalfa 2000

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Beaver
Rangelander	2178	-	2178	124
DK 124	2116	-	2116	120
DS380-BY	2082	-	2082	118
Rambler	2027	-	2027	115
EX101	2021	-	2021	115
"3008	1957	-	1957	111
DS2000	1943	-	1943	110
DS030-BY	1909	-	1909	109
DS028-BY	1893	-	1893	108
DS027-BY	1885	-	1885	107
"9603	1795	-	1795	102
Beaver	**1759**	**-**	**1759**	**100**
CW 73038	1716	-	1716	98
DK 134	1711	-	1711	97
DS029-BY	1710	-	1710	97
AC Blue J	1428	-	1428	81
54V54	1371	-	1371	78
MEAN	1853	-	1853	
C.V. (%)	14	-	14	
LSD(0.05)	375	-	375	

Table 2.1. 1 Netherhill Alfalfa 2000

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Beaver
Rangelander	2178	-	2178	124
DK 124	2116	-	2116	120
DS380-BY	2082	-	2082	118
Rambler	2027	-	2027	115
EX101	2021	-	2021	115
"3008	1957	-	1957	111
DS2000	1943	-	1943	110
DS030-BY	1909	-	1909	109
DS028-BY	1893	-	1893	108
DS027-BY	1885	-	1885	107
"9603	1795	-	1795	102
Beaver	**1759**	-	**1759**	**100**
CW 73038	1716	-	1716	98
DK 134	1711	-	1711	97
DS029-BY	1710	-	1710	97
AC Blue J	1428	-	1428	81
54V54	1371	-	1371	78
MEAN	1853	-	1853	
C.V. (%)	14	-	14	
LSD(0.05)	375	-	375	

Table 2.1. 2 Netherhill Alfalfa 1999

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Beaver
ZG 9831	3868	-	3868	126
CW 4223	3817	-	3817	124
CW 6408	3699	-	3699	120
DS 9923	3636	-	3636	118
SL 9902	3588	-	3588	117
DS 9925	3380	-	3380	110
SL 9901	3351	-	3351	109
DS 9927	3215	-	3215	105
SL 9900	3199	-	3199	104
DS 9929	3182	-	3182	103
Rambler	3130	-	3130	102
Beaver	**3077**	**-**	**3077**	**100**
DS 9928	3029	-	3029	98
4241	2858	-	2858	93
C227	2822	-	2822	92
Anchor	2791	-	2791	91
Gibraltar	2743	-	2743	89
3030	2679	-	2679	87
DS 9924	2656	-	2656	86
R923	2649	-	2649	86
2065 MF	2568	-	2568	83
C304	2445	-	2445	79
Geneva	2295	-	2295	75
R922	2219	-	2219	72
MEAN	3037	-	3037	
C.V. (%)	31	-	31	
LSD(0.05)	ns	-	ns	

Note:Due to the extreme draught in 2001, this alfalfa trial failed to produce adequate biomass yield to justify harvesting

Table 2.1. 3 Netherhill Alfalfa 1998

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 28/06/2000	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	3172	6297	2650	-	2650	2911	4473	101
Beaver	**3561**	**6263**	**2603**	-	**2603**	**3082**	**4433**	**100**
ZG 9711C	3341	6072	2672	-	2672	3007	4372	99
ZG 9721	3783	6260	2263	-	2263	3023	4262	96
CW 5302	2842	5668	2782	-	2782	2812	4225	95
Rambler	3646	6056	2370	-	2370	3008	4213	95
5301	2704	5633	2377	-	2377	2540	4005	90
WL 232HQ	3109	5565	2352	-	2352	2731	3959	89
4321	2948	5691	2219	-	2219	2583	3955	89
Spredor GT	2856	5207	2523	-	2523	2690	3865	87
CW 5440	2681	5194	2534	-	2534	2607	3864	87
53Q60	2490	5059	2431	-	2431	2461	3745	84
R801	2634	4937	2474	-	2474	2554	3705	84
MEAN	3059	5685	2481	-	2481	2770	4083	
C.V. (%)	8	10	15	-	15		11	
LSD(0.05)	365	784	517	-	517		761	

Table 2.1. 2 Netherhill Alfalfa 1999

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Beaver
ZG 9831	3868	-	3868	126
CW 4223	3817	-	3817	124
CW 6408	3699	-	3699	120
DS 9923	3636	-	3636	118
SL 9902	3588	-	3588	117
DS 9925	3380	-	3380	110
SL 9901	3351	-	3351	109
DS 9927	3215	-	3215	105
SL 9900	3199	-	3199	104
DS 9929	3182	-	3182	103
Rambler	3130	-	3130	102
Beaver	**3077**	-	**3077**	**100**
DS 9928	3029	-	3029	98
4241	2858	-	2858	93
C227	2822	-	2822	92
Anchor	2791	-	2791	91
Gibraltar	2743	-	2743	89
3030	2679	-	2679	87
DS 9924	2656	-	2656	86
R923	2649	-	2649	86
2065 MF	2568	-	2568	83
C304	2445	-	2445	79
Geneva	2295	-	2295	75
R922	2219	-	2219	72
MEAN	3037	-	3037	
C.V. (%)	31	-	31	
LSD(0.05)	ns	-	ns	

Note:Due to the extreme draught in 2001, this alfalfa trial failed to produce adequate biomass yield to justify harvesting

Table 2.1. 3 Netherhill Alfalfa 1998

Alfalfa Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 28/06/2000	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	3172	6297	2650	-	2650	2911	4473	101
Beaver	**3561**	**6263**	**2603**	-	**2603**	**3082**	**4433**	**100**
ZG 9711C	3341	6072	2672	-	2672	3007	4372	99
ZG 9721	3783	6260	2263	-	2263	3023	4262	96
CW 5302	2842	5668	2782	-	2782	2812	4225	95
Rambler	3646	6056	2370	-	2370	3008	4213	95
5301	2704	5633	2377	-	2377	2540	4005	90
WL 232HQ	3109	5565	2352	-	2352	2731	3959	89
4321	2948	5691	2219	-	2219	2583	3955	89
Spredor GT	2856	5207	2523	-	2523	2690	3865	87
CW 5440	2681	5194	2534	-	2534	2607	3864	87
53Q60	2490	5059	2431	-	2431	2461	3745	84
R801	2634	4937	2474	-	2474	2554	3705	84
MEAN	3059	5685	2481	-	2481	2770	4083	
C.V. (%)	8	10	15	-	15		11	
LSD(0.05)	365	784	517	-	517		761	

Table 2.1. 4 Netherhill Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 9501
Netherhill, SK.

Variety	1996		1997	1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 4/1996	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) June 25/1997	CUT#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
3B21	7112	9247	5432	961	1089	2050	4502	5576	110
ABI 9136	6624	9310	5313	1045	1041	2085	4327	5569	110
Lird 4	6731	8737	5665	741	964	1704	4379	5369	106
93-136	6885	9020	5283	705	1048	1753	4291	5352	105
MagnumIIIWet	6293	8662	5293	908	1097	2005	4165	5320	105
92-31	6322	8735	5026	975	1040	2015	4107	5258	104
CW 2440	6359	8556	4909	887	1176	2062	4051	5176	102
Rambler	6487	8521	5115	696	1079	1776	4100	5137	101
B44	6488	8479	5020	792	1003	1796	4100	5098	100
ZG 9437	6430	8107	5511	721	927	1647	4221	5088	100
Beaver	**6188**	**8382**	**4944**	**925**	**987**	**1912**	**4019**	**5079**	**100**
CW 2353	6266	8308	4959	794	1119	1913	4006	5060	100
922972	6289	8323	4800	863	978	1841	3984	4988	98
CW 2360	6691	8614	4482	829	1006	1834	4001	4977	98
PS95-106	6309	8330	4718	844	940	1784	3957	4944	97
2T77	6369	8199	4764	636	989	1625	3923	4862	96
DS 9313	5930	7662	5111	785	947	1732	3942	4835	95
2T74	6586	8245	4401	632	858	1490	3873	4712	93
ZG 9419	6754	8447	4056	517	902	1419	3776	4641	91
BPR 366	5860	7730	4452	676	1006	1682	3662	4621	91
Anchor	5650	7720	4302	788	937	1725	3580	4582	90
DS 9315	5785	7651	4196	683	927	1610	3555	4486	88
ZG 9425	5976	7597	4204	721	900	1621	3634	4474	88
DS 907	5942	7596	4035	723	867	1590	3567	4407	87
MEAN	6347	8341	4833	785	993	1778	3988	4984	
CV(%)	11	13	22	29	17	19		18	
LSD(0.05)	963	ns	ns	ns	ns	ns		473	

Table 2.1. 5 Netherhill Clover 1999

Red Clover Variety Adaptation Test
Netherhill, SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Altaswede
Vivi (RC)	2631	-	2631	109
Altaswede	**2410**	-	**2410**	**100**
Aurora	1584	-	1584	66
NSCL 29	1433	-	1433	59
BOR 2222	946	-	946	39
MEAN	1801	-	1801	
C.V. (%)	31	-	31	
LSD(0.05)	868	-	868	

Note: Due to the extreme draught in 2001, this trial failed to produce adequate biomass to justify harvesting

Table 2.1. 4 Netherhill Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 9501
Netherhill, SK.

Variety	1996		1997	1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 4/1996	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) June 25/1997	CUT#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
3B21	7112	9247	5432	961	1089	2050	4502	5576	110
ABI 9136	6624	9310	5313	1045	1041	2085	4327	5569	110
Lird 4	6731	8737	5665	741	964	1704	4379	5369	106
93-136	6885	9020	5283	705	1048	1753	4291	5352	105
MagnumIIIWet	6293	8662	5293	908	1097	2005	4165	5320	105
92-31	6322	8735	5026	975	1040	2015	4107	5258	104
CW 2440	6359	8556	4909	887	1176	2062	4051	5176	102
Rambler	6487	8521	5115	696	1079	1776	4100	5137	101
B44	6488	8479	5020	792	1003	1796	4100	5098	100
ZG 9437	6430	8107	5511	721	927	1647	4221	5088	100
Beaver	**6188**	**8382**	**4944**	**925**	**987**	**1912**	**4019**	**5079**	**100**
CW 2353	6266	8308	4959	794	1119	1913	4006	5060	100
922972	6289	8323	4800	863	978	1841	3984	4988	98
CW 2360	6691	8614	4482	829	1006	1834	4001	4977	98
PS95-106	6309	8330	4718	844	940	1784	3957	4944	97
2T77	6369	8199	4764	636	989	1625	3923	4862	96
DS 9313	5930	7662	5111	785	947	1732	3942	4835	95
2T74	6586	8245	4401	632	858	1490	3873	4712	93
ZG 9419	6754	8447	4056	517	902	1419	3776	4641	91
BPR 366	5860	7730	4452	676	1006	1682	3662	4621	91
Anchor	5650	7720	4302	788	937	1725	3580	4582	90
DS 9315	5785	7651	4196	683	927	1610	3555	4486	88
ZG 9425	5976	7597	4204	721	900	1621	3634	4474	88
DS 907	5942	7596	4035	723	867	1590	3567	4407	87
MEAN	6347	8341	4833	785	993	1778	3988	4984	
CV(%)	11	13	22	29	17	19		18	
LSD(0.05)	963	ns	ns	ns	ns	ns		473	

Table 2.1. 5 Netherhill Clover 1999

Red Clover Variety Adaptation Test
Netherhill, SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
	June 28/2000	-		
Vivi (RC)	2631	-	2631	109
Altaswede	**2410**	-	**2410**	**100**
Aurora	1584	-	1584	66
NSCL 29	1433	-	1433	59
BOR 2222	946	-	946	39
MEAN	1801	-	1801	
C.V. (%)	31	-	31	
LSD(0.05)	868	-	868	

Note: Due to the extreme draught in 2001, this trial failed to produce adequate biomass to justify harvesting

Table 2.1. 6 Netherhill Clover 1998

Red Clover Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Altaswede	**1848**	**4820**	**1306**	**-**	**1306**	**1577**	**3063**	**100**
Gorby	1327	4501	1024	-	1024	1176	2763	90
Wildcat	1423	3469	985	-	985	1204	2227	73
MEAN	1533	4263	1105	-	1105	1319	2684	
C.V. (%)	12	12	25	-	25		15	
LSD(0.05)	319	849	ns	-	ns		ns	

Note: Due the the extreme draught conditions in 2001, plant regrowth was not sufficient to justify harvesting the forage plots.

Table 2.1. 7 Netherhill Bromegrass 1999

Bromegrass Variety Adaptation Test
Netherhill, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) June 28/2001	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
S-93561	3601	1927	-	1927	2764	105
Carlton	**3830**	**1443**	**-**	**1443**	**2637**	**100**
MB-A	3079	1512	-	1512	2295	87
LOBF9201	3188	1270	-	1270	2229	85
Fleet	3173	1193	-	1193	2183	83
LOBF9202	3126	1138	-	1138	2132	81
MEAN	3333	1414	-	1414	2373	
C.V. (%)	9	28	-	28	15	
LSD(0.05)	448	604	-	604	ns	

Table 2.1. 6 Netherhill Clover 1998

Red Clover Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Altaswede	**1848**	**4820**	**1306**	**-**	**1306**	**1577**	**3063**	**100**
Gorby	1327	4501	1024	-	1024	1176	2763	90
Wildcat	1423	3469	985	-	985	1204	2227	73
MEAN	1533	4263	1105	-	1105	1319	2684	
C.V. (%)	12	12	25	-	25		15	
LSD(0.05)	319	849	ns	-	ns		ns	

Note: Due the the extreme draught conditions in 2001, plant regrowth was not sufficient to justify harvesting the forage plots.

Table 2.1. 7 Netherhill Bromegrass 1999

Bromegrass Variety Adaptation Test
Netherhill, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) June 28/2001	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
S-93561	3601	1927	-	1927	2764	105
Carlton	**3830**	**1443**	-	**1443**	**2637**	**100**
MB-A	3079	1512	-	1512	2295	87
LOBF9201	3188	1270	-	1270	2229	85
Fleet	3173	1193	-	1193	2183	83
LOBF9202	3126	1138	-	1138	2132	81
MEAN	3333	1414	-	1414	2373	
C.V. (%)	9	28	-	28	15	
LSD(0.05)	448	604	-	604	ns	

Table 2.1. 8 Netherhill Smooth Bromegrass 1995

1995 Brome Variety Adaptation Test
9504
Netherhill, SK.

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha) July 16/1996	Total Forage Yield (kg DM/ha) June 25/1997	CUT#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
Radisson	7430	4353	497	1387	1883	4555	103
Carlton	7054	4271	513	1487	1999	4441	100
UGG 1801	6686	3874	429	1316	1744	4101	92
MEAN	7057	4166	479	1396	1876	4366	
CV(%)	4	6	13	10	7	5	
LSD(0.05)	473	ns	ns	ns	ns	ns	

Table 2.1. 9 Netherhill Orchardgrass 1998

Orchard Grass
Netherhill, SK
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Kay	**2243**	**5171**	**1746**	-	**1746**	**1994**	**3458**	**100**
OFI 93L	2395	5739	1053	-	1053	1724	3396	98
OG96-1	2158	4953	1444	-	1444	1801	3198	92
OG96-2	2961	5086	1067	-	1067	2014	3076	89
OG96-3	2361	5119	908	-	908	1634	3014	87
Mean	2423	5213	1243	-	1243	1833	3228	
C.V. (%)	15	9	31	-	31		14	
LSD (0.05)	547	750	592	-	592		ns	

Note: Due to the extreme draught conditions in 2001, plant regrowth as not sufficient to justify harvesting.

Table 2.1. 8 Netherhill Smooth Bromegrass 1995

1995 Brome Variety Adaptation Test
9504
Netherhill, SK.

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha) July 16/1996	Total Forage Yield (kg DM/ha) June 25/1997	CUT#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
Radisson	7430	4353	497	**1387**	1883	4555	103
Carlton	**7054**	**4271**	**513**	**1487**	**1999**	**4441**	**100**
UGG 1801	6686	3874	429	**1316**	1744	4101	92
MEAN	7057	4166	479	1396	1876	4366	
CV(%)	4	6	13	10	7	5	
LSD(0.05)	473	ns	ns	ns	ns	ns	

Table 2.1. 9 Netherhill Orchardgrass 1998

Orchard Grass
Netherhill, SK
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Kay	**2243**	**5171**	**1746**	-	**1746**	**1994**	**3458**	**100**
OFI 93L	2395	5739	1053	-	1053	1724	3396	98
OG96-1	2158	4953	1444	-	1444	1801	3198	92
OG96-2	2961	5086	1067	-	1067	2014	3076	89
OG96-3	2361	5119	908	-	908	1634	3014	87
Mean	2423	5213	1243	-	1243	1833	3228	
C.V. (%)	15	9	31	-	31		14	
LSD (0.05)	547	750	592	-	592		ns	

Note: Due to the extreme draught conditions in 2001, plant regrowth as not sufficient to justify harvesting.

Table 2.1. 10 Netherhill Timothy, Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchordgrass and Meadow Foxtail
Netherhill, SK
Test 9505

Variety	1997	1998			2 year average	
	Total Forage Yield (kg DM/ha) June 25/1997	Cut#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jay orchardgrass	2953	385	1093	1478	2216	103
UGG1702 timothy	3114	340	949	1289	2202	102
Climax timothy	**2957**	**383**	**964**	**1347**	**2152**	**100**
Tuuka timothy	3152	225	891	1116	2134	99
Bor 80102 timothy	3012	253	896	1150	2081	97
UGG1701 timothy	2756	348	869	1217	1986	92
Kay orchardgrass	2422	408	1080	1489	1955	91
PS951 orchardgrass	1665	440	1100	1540	1603	74
Mountain meadow foxtail	2057	372	746	1118	1588	74
Dan meadow foxtail	2208	435	509	944	1576	73
Haka orchardgrass	1872	383	654	1037	1455	68
Roughrider orchardgrass	1528	364	755	1119	1324	61
MEAN	2475	361	876	1237	1855	
CV(%)	20	43	32	28	23	
LSD	713	ns	ns	ns	ns	

Note: This trial did not survive well enough to justify harvesting in 1999.

Table 2.1. 11 Netherhill Timothy 1998

Timothy Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Joliette	3642	6291	2688	-	2688	3165	4489	122
Bor72002	3673	6336	2616	-	2616	3144	4476	121
Bor94301	3123	5628	2508	-	2508	2815	4068	110
Climax	**2988**	**5120**	**2259**	-	**2259**	**2623**	**3689**	**100**
MEAN	3356	5844	2517	-	2517	2937	4180	
C.V. (%)	11	11	17	-	17		13	
LSD(0.05)	ns	ns	ns	-	ns		ns	

Note:The extreme draught in the summer of 2001 resulted in no forage timothy yield at Netherhill

Table 2.1. 10 Netherhill Timothy, Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchordgrass and Meadow Foxtail
Netherhill, SK
Test 9505

Variety	1997	1998			2 year average	
	Total Forage Yield (kg DM/ha) June 25/1997	Cut#1 Forage Yield (kg DM/ha) June 22/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 6/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jay orchardgrass	2953	385	1093	1478	2216	103
UGG1702 timothy	3114	340	949	1289	2202	102
Climax timothy	**2957**	**383**	**964**	**1347**	**2152**	**100**
Tuuka timothy	3152	225	891	1116	2134	99
Bor 80102 timothy	3012	253	896	1150	2081	97
UGG1701 timothy	2756	348	869	1217	1986	92
Kay orchardgrass	2422	408	1080	1489	1955	91
PS951 orchardgrass	1665	440	1100	1540	1603	74
Mountain meadow foxtail	2057	372	746	1118	1588	74
Dan meadow foxtail	2208	435	509	944	1576	73
Haka orchardgrass	1872	383	654	1037	1455	68
Roughrider orchardgrass	1528	364	755	1119	1324	61
MEAN	2475	361	876	1237	1855	
CV(%)	20	43	32	28	23	
LSD	713	ns	ns	ns	ns	

Note: This trial did not survive well enough to justify harvesting in 1999.

Table 2.1. 11 Netherhill Timothy 1998

Timothy Variety Adaptation Test
Netherhill, SK.
Sown April 29, 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Joliette	3642	6291	2688	-	2688	3165	4489	122
Bor72002	3673	6336	2616	-	2616	3144	4476	121
Bor94301	3123	5628	2508	-	2508	2815	4068	110
Climax	**2988**	**5120**	**2259**	-	**2259**	**2623**	**3689**	**100**
MEAN	3356	5844	2517	-	2517	2937	4180	
C.V. (%)	11	11	17	-	17		13	
LSD(0.05)	ns	ns	ns	-	ns		ns	

Note:The extreme draught in the summer of 2001 resulted in no forage timothy yield at Netherhill

Table 2.1. 12 Netherhill Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Netherhill, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) June 28/2000	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	**3553**	**2838**	**-**	**2838**	**3196**	**100**
Vavilov	2429	2802	-	2802	2616	82
Douglas	1494	1724	-	1724	1609	50
MEAN	2492	2455	-	2455	2473	
C.V. (%)	13	24	-	24	19	
LSD(0.05)	566	1023	-	1023	ns	

Table 2.1. 13 Netherhill Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Netherhill, SK
Test 9503

Variety	1996		1997		1998		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 4/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 25/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
Courtenay tall fescue	**2836**	**4589**	**4450**	**5429**	**353**	**932**	**2546**	**3650**	**100**
Ensign meadow fescue	3111	3939	4592	5049	139	526	2614	3171	87
PS953 creeping red fescue	3783	4274	4530	4837	154	309	2823	3140	86
Boreale creeping red fescue	4530	4814	3654	3916	384	581	2856	3103	85
PS952 meadow fescue	2881	3758	4453	4886	185	438	2506	3027	83
MCF101 tall fescue	2343	3730	3431	4587	196	687	1990	3001	82
UGG1501 tall fescue	2452	3486	3418	4049	196	558	2022	2662	73
Retu tall fescue	2242	3318	3215	3835	239	728	1899	2627	72
MEAN	3022	3988	3968	4573	231	595	2407	3024	
CV(%)	16	15	12	13	59	36		24	
LSD	739	868	725	856	ns	311		577	

Table 2.1. 12 Netherhill Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Netherhill, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) June 28/2000	CUT#1 Forage Yield (kg DM/ha) June 25/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	**3553**	**2838**	-	**2838**	**3196**	**100**
Vavilov	2429	2802	-	2802	2616	82
Douglas	1494	1724	-	1724	1609	50
MEAN	2492	2455	-	2455	2473	
C.V. (%)	13	24	-	24	19	
LSD(0.05)	566	1023	-	1023	ns	

Table 2.1. 13 Netherhill Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Netherhill, SK
Test 9503

Variety	1996		1997		1998		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 4/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 25/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
Courtenay tall fescue	**2836**	**4589**	**4450**	**5429**	**353**	**932**	**2546**	**3650**	**100**
Ensign meadow fescue	3111	3939	4592	5049	139	526	2614	3171	87
PS953 creeping red fescue	3783	4274	4530	4837	154	309	2823	3140	86
Boreale creeping red fescue	4530	4814	3654	3916	384	581	2856	3103	85
PS952 meadow fescue	2881	3758	4453	4886	185	438	2506	3027	83
MCF101 tall fescue	2343	3730	3431	4587	196	687	1990	3001	82
UGG1501 tall fescue	2452	3486	3418	4049	196	558	2022	2662	73
Retu tall fescue	2242	3318	3215	3835	239	728	1899	2627	72
MEAN	3022	3988	3968	4573	231	595	2407	3024	
CV(%)	16	15	12	13	59	36		24	
LSD	739	868	725	856	ns	311		577	

2.2 Nipawin

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
2000	Alfalfa	2001	2.2.1
1996	Alfalfa	1997-2000	2.2.2
1995	Alfalfa	1996-1998	2.2.3
1999	Clover	2000-2001	2.2.4
1998	Red Clover	1999-2000	2.2.5
1995	Clover	1998	2.2.6
1996	Cicer milk-vetch	1997-1999	2.2.7
1995	Miscellaneous grasses	1996-2001	2.2.8
1999	Bromegrass	2000-2001	2.2.9
1995	Bromegrass	1996-2001	2.2.10
2000	Timothy	2001	2.2.11
1999	Timothy	2001	2.2.12
1998	Timothy	1999-2001	2.2.13
1996	Timothy	1997-1999	2.2.14
1995	Timothy, Orchardgrass and Meadow Foxtail	1996-2001	2.2.15
1999	Crested Wheatgrass	2000-2001	2.2.16
1997	Crested Wheatgrass	1998-2000	2.2.17
1998	Orchardgrass	1999-2001	2.2.18
1995	Fescue and Ryegrass	1996-1998	2.2.19

Each year new forage variety trials are established at this site. When looking at the data from forage trials established after 1998, or for trials with less than three years of data, please use caution in the interpretation of the results. In general, three years of data are required before the results can be interpreted with confidence.

For information on the weather conditions at Nipawin over the past six years, please refer to table A.2 on the appendix A of this document. Unlike most of Saskatchewan in 2001, the Nipawin area received more than adequate moisture throughout the growing season. This is especially true for the site North of Nipawin that received more than 11 inches of rainfall between April and July.

Of the 16 new alfalfa cultivars tested from 1996 to 2000 (table 2.2.2), all have the potential to out yielded beaver by at least 4% when averaged over 4 years except SD201. Of these varieties, AgriMaster (PS96-21) and TMF 421 (CW2227) are now registered and yielded 115 and 105% of beaver respectively.

Of the 21 new cultivars established in the 1995, Stockwell (DS 9313), AC Grazeland Br (LIRD 4) and Hornet (DS 907) yielded 115, 105 and 104% of beaver respectively (table 2.2.3). Nine of the new varieties indicated the potential to out-yield beaver when the data were averaged over years. The other 12 cultivars yielded between 90 and 100% of beaver.

In 1996, Cicer milk-vetch trials were sown in conjunction with the Western Forage Variety Testing program to look at three new experimental lines. All three of the new, lines out-yielded Oxley by 25% or more (table 2.2.7). Windsor (UGG 1901) and Oxley II (LRC92-1) yielded 126 and 125% of Oxley, respectively.

In 1995, a research trial was established at Nipawin to look at various grass species/cultivars of interest to the forage industry (table 2.2.8). These trials were harvested over a 5-year period from 1996 to 2001. The results indicate that over the 5-year period, Kirk crested wheatgrass and Kay orchardgrass yielded similarly; with Kirk-94 crested wheatgrass having a sight yield advantage. These plots were fertilized up to the fall of 1997, but did not receive fertilizer again until the fall of 2000. In 1996, experimental line UMFT tall fescue out-yielded all other forage cultivars except Courtenay tall fescue (table 2.2.8). In 1997, UMOR-94 orchardgrass out-yielded all other cultivars except Kirk-94, Kirk, Kay, RS Hoffman and UMFT tall fescue. In 1998, Kirk out-yielded all other cultivars in the test. However, in 2000, after, fertilization had not been applied for three years, Syna Russian wildrye out-yielded all other varieties in the trials except Prairieland Alti-wilde grass. In 2001, Prairieland out-yielded all other varieties except M5 Altai wild ryegrass. It is very interesting to note the differences in forage yield between species and year. This really emphasizes the importance of have a number of difference forage species stands in your forage rotation to maximize forage yield potential

The new smooth bromegrass variety Radisson yielded 103% of Carlton when the data are averaged over the 5-year period from 1996 to 2001(table 2.2.10).

The new timothy cultivar Joliette (SVTT 8407) yielded 111% of Climax when the data are averaged over a three-year period (table 2.2.13). However, in trials harvested from 1997 to 1999, Climax consistently showed a slight yield advantage over the new cultivars tested (table 2.2.14).

In 1995, a forage trial consisting of Orchardgrass, Timothy and Meadow Foxtail cultivars was established at Nipawin. Over the 5-year period from 1996 to 2001, Jay and Kay orchardgrass yielded 130 and 120% of Climax when the data were averaged over years (table 2.2.15). In the same study, the new timothy line UGG 1701 yielded 114% of Climax.

Over a 3 year period from 1998 to 2000, the newly registered crested wheatgrass varieties Goliath (S-9240) and CD II yielded 106 and 102% of Kirk crested wheatgrass, respectively (table 2.2.17).

The new experimental orchardgrass line OG96-1 yielded 114% of Kay when the data were average over years (table 2.2.18).

Data from the 1995 seeded Fescue and Ryegrass trial, indicates that Courtenay tall fescue, out yielded all of the other fescue varieties in the test over a three year period from 1996 to 1998, except MCF 101 and Retu tall fescue (table 2.2.19).

Table 2.2. 1 Nipawin Alfalfa 2000

2000 Alfalfa WF Variety Adaptation Test
Nipawin, Sask.
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) Aug 13/2001	Total Forage Yield (kg DM/ha)	% of Beaver
DK 134	7807	4300	12107	112
54V54	7306	4606	11912	110
DS029-BY	7365	4341	11707	108
DS2000	7226	3715	10941	101
CW 73038	6325	4535	10860	100
Beaver	**6633**	**4215**	**10848**	**100**
"3008	6088	4745	10833	100
DS030-BY	6598	4150	10748	99
"9603	6301	4377	10679	98
AC Blue J	6480	3971	10451	96
DS027-BY	7045	3330	10375	96
Rambler	6055	4293	10348	95
DS028-BY	6014	4201	10215	94
Rangelander	6340	3872	10212	94
DK 124	5847	4163	10010	92
EX101	5557	4258	9814	90
DS380-BY	5692	3948	9639	89
MEAN	6510	4178	10688	
C.V. (%)	13	11	11	
LSD(0.05)	1206	655	1603	

Table 2.2. 1 Nipawin Alfalfa 2000

2000 Alfalfa WF Variety Adaptation Test
Nipawin, Sask.
Sown May 2000

Variety	2001			% of Beaver
	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) Aug 13/2001	Total Forage Yield (kg DM/ha)	
DK 134	7807	4300	12107	112
54V54	7306	4606	11912	110
DS029-BY	7365	4341	11707	108
DS2000	7226	3715	10941	101
CW 73038	6325	4535	10860	100
Beaver	**6633**	**4215**	**10848**	**100**
"3008	6088	4745	10833	100
DS030-BY	6598	4150	10748	99
"9603	6301	4377	10679	98
AC Blue J	6480	3971	10451	96
DS027-BY	7045	3330	10375	96
Rambler	6055	4293	10348	95
DS028-BY	6014	4201	10215	94
Rangelander	6340	3872	10212	94
DK 124	5847	4163	10010	92
EX101	5557	4258	9814	90
DS380-BY	5692	3948	9639	89
MEAN	6510	4178	10688	
C.V. (%)	13	11	11	
LSD(0.05)	1206	655	1603	

Table 2.2. 2 Nipawin Alfalfa 1996

1996 Alfalfa Variety Adaptation Test
Test 9601
Nipawin, SK.

Variety	1997		1998		1999		2000		4 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
PVN1205	5620	6651	1845	4958	2461	4209	8205	8205	4533	6006	118
PS96-21	6302	7417	1833	4913	2078	3967	7126	7126	4335	5856	115
93-110	5828	6976	1619	4611	2096	3781	7720	7720	4316	5772	114
XAL46	6232	7187	1354	4131	2199	4022	7144	7144	4232	5621	111
RAMBLER	6331	6908	1523	3903	2869	4495	7070	7070	4448	5594	110
ANCHOR	6668	7712	1632	4428	2242	3892	6345	6345	4222	5594	110
92-28	5228	6335	1835	4907	2118	3824	7258	7258	4110	5581	110
CW3304	6186	7079	1572	4435	2283	3902	6817	6817	4215	5558	109
3B16	6323	7086	1492	4261	2044	3798	6856	6856	4179	5500	108
PVN1204	5579	6629	1206	3518	2160	3672	8261	8261	4301	5488	108
94GG	5462	6324	1444	3960	2091	3613	7648	7648	4161	5386	106
92-132	4154	5150	1545	4486	2027	3742	7984	7984	3928	5340	105
CW2227	5698	6408	1405	4036	2210	3641	7204	7204	4129	5322	105
CW3313	5855	6706	1446	4289	1840	3312	6868	6868	4002	5294	104
PVN1206	5330	6195	1516	4613	2169	3956	6291	6291	3826	5264	104
BEAVER	**5834**	**6625**	**1226**	**3706**	**2163**	**3750**	**6240**	**6240**	**3866**	**5080**	**100**
SD201	2298	2379	995	2728	1975	3013	6805	6805	3019	3759	74
MEAN	5584	6457	1499	4228	2178	3799	7167	7167	4107	5413	
C.V. (%)	13	12	29	19	12	12	13	13		14	
LSD(0.05)	1034	1084	ns	1146	380	662	1292	1292		920	

Table 2.2. 3 Nipawin Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 9501
Nipawin, SK.

Variety	1996		1997		1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 10/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
DS 9313	6397	10851	6817	8009	1401	3430	4831	5442	7897	115
Anchor	6185	10258	6297	7129	2710	3193	5903	5314	7763	113
3B21	5577	9631	5688	6826	1206	3363	4569	4729	7308	106
Lird 4	6366	10837	5587	6584	1182	3059	4240	4690	7221	105
B44	6534	10917	5158	6246	1141	3162	4302	4641	7155	104
DS 907	6473	10770	5186	6360	2025	2292	4316	5025	7149	104
PS95-106	6077	10396	5721	6457	1088	3088	4176	4462	7010	102
ABI 9136	6191	10115	4713	5527	1199	3054	4253	4479	7009	102
ZG 9437	6729	11313	5146	5996	875	2734	3610	4674	6973	101
92-31	6791	11140	5310	6224	1317	3242	4559	5136	6960	101
Beaver	**6392**	**10341**	**6131**	**6680**	**826**	**2796**	**3621**	**4760**	**6881**	**100**
2T74	6919	10971	5201	5879	876	2893	3769	4457	6873	100
CW 2353	5889	10346	4645	5484	1067	3597	4664	4344	6832	99
DS 9315	6284	10445	5060	5875	1182	2923	4105	4668	6808	99
ZG 9425	6015	9551	5408	6585	1197	2926	4123	4743	6753	98
MagnumIIIWet	6195	10199	5548	6246	900	2891	3791	4643	6745	98
ZG 9419	6308	10081	5287	6092	920	3096	4017	4565	6730	98
BPR 366	6001	10491	5156	5926	922	2572	3494	4702	6637	96
93-136	6081	10166	5716	6656	1228	804	2032	4689	6632	96
CW 2360	5873	9958	5211	6069	914	2632	3546	4598	6524	95
Rambler	6660	9824	5496	6090	956	2595	3551	4565	6488	94
CW 2440	5979	9923	4856	5656	731	2673	3405	4394	6328	92
922972	6381	10473	5202	6057	1190	3160	4350	4435	6284	91
2T77	5875	9622	4701	5219	852	2805	3657	4440	6166	90
MEAN	6257	10359	5385	6245	1163	2874	4037	4691	6880	
C.V. (%)	35	11	14	14	34	18	21		14	
LSD(0.05)	ns	ns	1044	1272	561	727	1177		ns	

Table 2.2. 2 Nipawin Alfalfa 1996

1996 Alfalfa Variety Adaptation Test
Test 9601
Nipawin, SK.

Variety	1997		1998		1999		2000		4 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
PVN1205	5620	6651	1845	4958	2461	4209	8205	8205	4533	6006	118
PS96-21	6302	7417	1833	4913	2078	3967	7126	7126	4335	5856	115
93-110	5828	6976	1619	4611	2096	3781	7720	7720	4316	5772	114
XAL46	6232	7187	1354	4131	2199	4022	7144	7144	4232	5621	111
RAMBLER	6331	6908	1523	3903	2869	4495	7070	7070	4448	5594	110
ANCHOR	6668	7712	1632	4428	2242	3892	6345	6345	4222	5594	110
92-28	5228	6335	1835	4907	2118	3824	7258	7258	4110	5581	110
CW3304	6183	7079	1572	4435	2283	3902	6817	6817	4215	5558	109
3B16	6323	7086	1492	4261	2044	3798	6856	6856	4179	5500	108
PVN1204	5579	6629	1206	3518	2160	3672	8261	8261	4301	5488	108
94GG	5462	6324	1444	3960	2091	3613	7648	7648	4161	5386	106
92-132	4154	5150	1545	4486	2027	3742	7984	7984	3928	5340	105
CW2227	5698	6408	1405	4036	2210	3641	7204	7204	4129	5322	105
CW3313	5855	6706	1446	4289	1840	3312	6868	6868	4002	5294	104
PVN1206	5330	6195	1516	4613	2169	3956	6291	6291	3826	5264	104
BEAVER	**5834**	**6625**	**1226**	**3706**	**2163**	**3750**	**6240**	**6240**	**3866**	**5080**	**100**
SD201	2298	2379	995	2728	1975	3013	6805	6805	3019	3759	74
MEAN	5584	6457	1499	4228	2178	3799	7167	7167	4107	5413	
C.V. (%)	13	12	29	19	12	12	13	13		14	
LSD(0.05)	1034	1084	ns	1146	380	662	1292	1292		920	

Table 2.2. 3 Nipawin Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 9501
Nipawin, SK.

Variety	1996		1997		1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	CUT#2 Forage Yield (kg DM/ha) Aug. 10/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
DS 9313	6397	10851	6817	8009	1401	3430	4831	5442	7897	115
Anchor	6185	10258	6297	7129	2710	3193	5903	5314	7763	113
3B21	5577	9631	5688	6826	1206	3363	4569	4729	7308	106
Lird 4	6366	10837	5587	6584	1182	3059	4240	4690	7221	105
B44	6534	10917	5158	6246	1141	3162	4302	4641	7155	104
DS 907	6473	10770	5186	6360	2025	2292	4316	5025	7149	104
PS95-106	6077	10396	5721	6457	1088	3088	4176	4462	7010	102
ABI 9136	6191	10115	4713	5527	1199	3054	4253	4479	7009	102
ZG 9437	6729	11313	5146	5996	875	2734	3610	4674	6973	101
92-31	6791	11140	5310	6224	1317	3242	4559	5136	6960	101
Beaver	**6392**	**10341**	**6131**	**6680**	**826**	**2795**	**3621**	**4760**	**6881**	**100**
2T74	6919	10971	5201	5879	876	2893	3769	4457	6873	100
CW 2353	5889	10346	4645	5484	1067	3597	4664	4344	6832	99
DS 9315	6284	10445	5060	5875	1182	2923	4105	4668	6808	99
ZG 9425	6015	9551	5408	6585	1197	2926	4123	4743	6753	98
MagnumIIIWet	6195	10199	5548	6246	900	2891	3791	4643	6745	98
ZG 9419	6308	10081	5287	6092	920	3096	4017	4565	6730	98
BPR 366	6001	10491	5156	5926	922	2572	3494	4702	6637	96
93-136	6081	10166	5716	6656	1228	804	2032	4689	6632	96
CW 2360	5873	9958	5211	6069	914	2632	3546	4598	6524	95
Rambler	6660	9824	5496	6090	956	2595	3551	4565	6488	94
CW 2440	5979	9923	4856	5656	731	2673	3405	4394	6328	92
922972	6381	10473	5202	6057	1190	3160	4350	4435	6284	91
2T77	5875	9622	4701	5219	852	2805	3657	4440	6166	90
MEAN	6257	10359	5385	6245	1163	2874	4037	4691	6880	
C.V. (%)	35	11	14	14	34	18	21		14	
LSD(0.05)	ns	ns	1044	1272	561	727	1177		ns	

Table 2.2. 4 Nipawin Clover 1999

Clover Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
	July 20/2000	July 5/2001	-			
NSCL 29	7643	4188	-	4188	5916	128
Vivi (RC)	8124	2225	-	2225	5175	112
Altaswede	**7434**	**1984**	-	**1984**	**4709**	**102**
Aurora	6123	3092	-	3092	4607	100
BOR 2222	5891	2377	-	2377	4134	90
Mean	7043	2773	-	2773	4908	
C.V. (%)	11	19	-	19	13	
LSD (0.05)	1199	804	-	804	ns	

Table 2.2. 5 Nipawin Clover 1998

Red Clover
Nipawin, SK
Sown May 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
	June 28/1999		July 20/2000	-				
Altaswede	**528**	**1897**	**2860**	-	**2860**	**1694**	**2378**	**100**
Gorby	478	1635	2586	-	2586	1532	2111	89
Wildcat	354	1300	2632	-	2632	1493	1966	83
Mean	453	1610	2693	-	2693	1573	2152	
C.V. (%)	23	13	18	-	18		18	
LSD (0.05)	ns	360	ns	-	ns		ns	

Table 2.2. 4 Nipawin Clover 1999

Clover Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) July 20/2000	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
NSCL 29	7643	4188	-	4188	5916	128
Vivi (RC)	8124	2225	-	2225	5175	112
Altaswede	**7434**	**1984**	**-**	**1984**	**4709**	**102**
Aurora	6123	3092	-	3092	4607	100
BOR 2222	5891	2377	-	2377	4134	90
Mean	7043	2773	-	2773	4908	
C.V. (%)	11	19	-	19	13	
LSD (0.05)	1199	804	-	804	ns	

Table 2.2. 5 Nipawin Clover 1998

Red Clover
Nipawin, SK
Sown May 1998

Variety	1999		2000			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 20/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Altaswede	**528**	**1897**	**2860**	**-**	**2860**	**1694**	**2378**	**100**
Gorby	478	1635	2586	-	2586	1532	2111	89
Wildcat	354	1300	2632	-	2632	1493	1966	83
Mean	453	1610	2693	-	2693	1573	2152	
C.V. (%)	23	13	18	-	18		18	
LSD (0.05)	ns	360	ns	-	ns		ns	

Table 2.2. 6 Nipawin Clover 1995

Clover Variety Trials
9572
Nipawin, SK.

Variety	1996		1998			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aurora
Aurora alsike clover	**4210**	**5544**	**737**	**-**	**737**	**2474**	**3141**	**100**
UGG 1601 alsike clover	4026	5141	755	-	755	2390	2948	94
California white clover	1063	2180	684	-	684	873	1432	46
Sonja white ciover	1157	1609	394	-	394	775	1001	32
MEAN	2614	3618	642	-	642	1628	2130	
C.V. (%)	27	29	16	-	16			
LSD(0.05)	958	1453	142	-	142			

Table 2.2. 7 Nipawin Cicer Milk-Vetch 1996

1996 Cicer Milk-Vetch
Nipawin, SK
9602

Variety	1997		1998		1999			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	CUT#2 Forage Yield (kg DM/ha) Aug. 23/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of OXLEY
LRC93-1	3381	4572	1008	3452	1258	1504	2762	1883	3596	157
UGG1901	2495	3524	968	3020	1127	1014	2141	1530	2895	126
LRC92-1	2773	3418	791	2674	1246	1293	2539	1603	2877	125
OXLEY	**2199**	**2970**	**675**	**2131**	**971**	**816**	**1787**	**1282**	**2296**	**100**
Mean	2712	3621	861	2819	1150	1157	2307	1574	2916	
C.V. (%)	18	17	17	15	15	31	21		18	
LSD (0.05)	796	980	234	656	ns	ns	ns		468	

Table 2.2. 6 Nipawin Clover 1995

Clover Variety Trials
9572
Nipawin, SK.

Variety	1996		1998			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aurora
Aurora alsike clover	**4210**	**5544**	**737**	**-**	**737**	**2474**	**3141**	**100**
UGG 1601 alsike clover	4026	5141	755	-	755	2390	2948	94
California white clover	1063	2180	684	-	684	873	1432	46
Sonja white clover	1157	1609	394	-	394	775	1001	32
MEAN	2614	3618	642	-	642	1628	2130	
C.V. (%)	27	29	16	-	16			
LSD(0.05)	958	1453	142	-	142			

Table 2.2. 7 Nipawin Cicer Milk-Vetch 1996

1996 Cicer Milk-Vetch
Nipawin, SK
9602

Variety	1997		1998		1999			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	CUT#2 Forage Yield (kg DM/ha) Aug. 23/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of OXLEY
LRC93-1	3381	4572	1008	3452	1258	1504	2762	1883	3596	157
UGG1901	2495	3524	968	3020	1127	1014	2141	1530	2895	126
LRC92-1	2773	3418	791	2674	1246	1293	2539	1603	2877	125
OXLEY	**2199**	**2970**	**675**	**2131**	**971**	**816**	**1787**	**1282**	**2296**	**100**
Mean	2712	3621	861	2819	1150	1157	2307	1574	2916	
C.V. (%)	18	17	17	15	15	31	21		18	
LSD (0.05)	796	980	234	656	ns	ns	ns		468	

Table 2.2. 8 Nipawin Miscellaneous Grasses 1995

1995 Miscellaneous Grasses Adaptation Test
9576
Nipawin, SK.

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) June 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk-94 CWG	8643	9757	6410	6617	3967	5106	1100	1289	4282	4774	101
Kirk CWG	**8873**	**9892**	**5758**	**5920**	**4179**	**5784**	**711**	**1351**	**4174**	**4732**	**100**
Kay orchardgrass	7143	9026	6443	6969	2584	5131	1293	1126	3718	4709	100
RS. Hoffman Hybrid wheatgrass	7946	9742	5868	6322	2750	4476	1236	698	3700	4495	95
UMOR-94 orchardgrass	7422	8941	6688	7101	2531	4451	720	1233	3719	4489	95
S-9240 CWG	7802	8978	5404	5630	4173	5428	928	1215	3904	4436	94
UMFT Tall fescue	9479	11028	5329	6128	1455	3681	428	872	3512	4427	94
Courtenay Tall fescue	8666	10896	4301	5434	1447	4066	579	887	3176	4372	92
Newhy '94 Hybrid wheatgrass	7998	9927	4721	5107	2949	4646	1202	839	3542	4344	92
Hycrest#2 CWG	7666	8897	4959	5172	4082	5346	645	1122	3695	4236	90
Vavilov CWG	6710	8279	4316	4621	2833	4353	2014	844	3343	4022	85
Siberian CWG	6757	8580	5097	5404	2849	4409	1149	566	3284	4022	85
Prarieland Altai wildrye	4766	6421	3282	4139	1781	3850	1406	2091	2665	3581	76
M5 Altai wildrye	4751	6330	3338	4278	2166	4133	1133	1975	2673	3570	75
Syna Russian wildrye	4483	5804	3880	4287	2700	4275	2206	1084	2871	3531	75
HybridBrdleaf Hybrid grass	6197	6814	4991	5132	2471	3323	1415	951	3205	3527	75
Bosoisky Russian wildrye	5172	6565	3931	4383	2328	4065	839	784	2611	3327	70
Douglas CWG	5490	5957	4931	4990	1829	2591	608	596	2691	2948	62
Hybrid3-Ways Hybrid wheatgrass	4841	6163	2865	3711	1361	3195	638	933	2128	2928	62
Swift Russian wildrye	4082	5279	3194	3573	1790	3342	1246	867	2236	2861	60
Turf-Sel CWG	4775	5840	3437	3683	1433	2593	1456	577	2336	2830	60
Turf'92 CWG	4780	5676	3058	3169	1718	2511	683	1021	2252	2612	55
Rhizome CWG	4763	5673	2824	2929	1557	2387	1127	546	2163	2532	54
MEAN	6487	7846	4566	4987	2475	4050	1077	1020	3125	3796	
C.V. (%)	12	11	24	22	13	10	23	43			
LSD(0.05)	1015	1074	1349	1403	401	498	307	557			

Table 2.2. 9 Nipawin Bromegrass 1999

Bromegrass Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
LOBF9201	10021	12251	9493	-	9493	10872	100
Carlton	**9796**	**11853**	**9816**	-	**9816**	**10835**	**100**
S-93561	10664	12097	8724	-	8724	10410	96
LOBF9202	8938	11048	8503	-	8503	9776	90
MB-A	9330	11502	7137	-	7137	9319	86
Fleet	9635	11283	7164	-	7164	9224	85
Mean	9731	11672	8473	-	8473	10073	
C.V. (%)	13	11	5	-	5	10	
LSD (0.05)	ns	ns	666	-	666	ns	

Table 2.2. 8 Nipawin Miscellaneous Grasses 1995

1995 Miscellaneous Grasses Adaptation Test
9576
Nipawin, SK.

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) June 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk-94 CWG	8643	9757	6410	6617	3967	5106	1100	1289	4282	4774	101
Kirk CWG	**8873**	**9892**	**5758**	**5920**	**4179**	**5784**	**711**	**1351**	**4174**	**4732**	**100**
Kay orchardgrass	7143	9026	6443	6969	2584	5131	1293	1126	3718	4709	100
RS. Hoffman Hybrid wheatgrass	7946	9742	5868	6322	2750	4476	1236	698	3700	4495	95
UMOR-94 orchardgrass	7422	8941	6688	7101	2531	4451	720	1233	3719	4489	95
S-9240 CWG	7802	8978	5404	5630	4173	5428	928	1215	3904	4436	94
UMFT Tall fescue	9479	11028	5329	6128	1455	3681	428	872	3512	4427	94
Courtenay Tall fescue	8666	10896	4301	5434	1447	4066	579	887	3176	4372	92
Newhy '94 Hybrid wheatgrass	7998	9927	4721	5107	2949	4646	1202	839	3542	4344	92
Hycrest#2 CWG	7666	8897	4959	5172	4082	5346	645	1122	3695	4236	90
Vavilov CWG	6710	8279	4316	4621	2833	4353	2014	844	3343	4022	85
Siberian CWG	6757	8580	5097	5404	2849	4409	1149	566	3284	4022	85
Prarieland Altai wildrye	4766	6421	3282	4139	1781	3850	1406	2091	2665	3581	76
M5 Altai wildrye	4751	6330	3338	4278	2166	4133	1133	1975	2673	3570	75
Syna Russian wildrye	4483	5804	3880	4287	2700	4275	2206	1084	2871	3531	75
HybridBrdleaf Hybrid grass	6197	6814	4991	5132	2471	3323	1415	951	3205	3527	75
Bosoisky Russian wildrye	5172	6565	3931	4383	2328	4065	839	784	2611	3327	70
Douglas CWG	5490	5957	4931	4990	1829	2591	608	596	2691	2948	62
Hybrid3-Ways Hybrid wheatgrass	4841	6163	2865	3711	1361	3195	638	933	2128	2928	62
Swift Russian wildrye	4082	5279	3194	3573	1790	3342	1246	867	2236	2861	60
Turf-Sel CWG	4775	5840	3437	3683	1433	2593	1456	577	2336	2830	60
Turf'92 CWG	4780	5676	3058	3169	1718	2511	683	1021	2252	2612	55
Rhizome CWG	4763	5673	2824	2929	1557	2387	1127	546	2163	2532	54
MEAN	6487	7846	4566	4987	2475	4050	1077	1020	3125	3796	
C.V. (%)	12	11	24	22	13	10	23	43			
LSD(0.05)	1015	1074	1349	1403	401	498	307	557			

Table 2.2. 9 Nipawin Bromegrass 1999

Bromegrass Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
LOBF9201	10021	12251	9493	-	9493	10872	100
Carlton	**9796**	**11853**	**9816**	-	**9816**	**10835**	**100**
S-93561	10664	12097	8724	-	8724	10410	96
LOBF9202	8938	11048	8503	-	8503	9776	90
MB-A	9330	11502	7137	-	7137	9319	86
Fleet	9635	11283	7164	-	7164	9224	85
Mean	9731	11672	8473	-	8473	10073	
C.V. (%)	13	11	5	-	5	10	
LSD (0.05)	ns	ns	666	-	666	ns	

Table 2.2. 10 Nipawin Smooth Bromegrass 1995

1995 Brome Variety Adaptation Test
9504
Nipawin, SK.

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
Radisson	9360	10244	7934	8231	4870	7053	1238	1089	4898	5571	103
Carlton	**8709**	**9853**	**8011**	**8393**	**4372**	**7057**	**896**	**843**	**4566**	**5408**	**100**
UGG 1801	7628	8610	7780	8061	4223	6534	1127	841	4320	5035	93
MEAN	8566	9569	7909	8228	4488	6882	1087	924	4595	5338	
CV'S	12	12	7	7	5	7	12	19			
LSD(0.05)	ns	ns	ns	ns	325	ns	216	ns			

Table 2.2. 11 Nipawin Timothy 2000

2000 Timothy WFV Test
Nipawin, SK
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Climax
PBQX-1	5633	-	5633	127
MOTIM	5354	-	5354	120
BOR 94374	5158	-	5158	116
BOR 94372	5116	-	5116	115
PCQX-39	4881	-	4881	110
CLIMAX	**4443**	**-**	**4443**	**100**
Mean	5098	-	5098	
C.V. (%)	11	-	11	
LSD (0.05)	828	-	828	

Table 2.2. 10 Nipawin Smooth Bromegrass 1995

1995 Brome Variety Adaptation Test
9504
Nipawin, SK.

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
Radisson	9360	10244	7934	8231	4870	7053	1238	1089	4898	5571	103
Carlton	8709	9853	8011	8393	4372	7057	896	843	4566	5408	100
UGG 1801	7628	8610	7780	8061	4223	6534	1127	841	4320	5035	93
MEAN	8566	9569	7909	8228	4488	6882	1087	924	4595	5338	
CV'S	12	12	7	7	5	7	12	19			
LSD(0.05)	ns	ns	ns	ns	325	ns	216	ns			

Table 2.2. 11 Nipawin Timothy 2000

2000 Timothy WFV Test
Nipawin, SK
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
	July 5/2001	-		
PBQX-1	5633	-	5633	127
MOTIM	5354	-	5354	120
BOR 94374	5158	-	5158	116
BOR 94372	5116	-	5116	115
PCQX-39	4881	-	4881	110
CLIMAX	**4443**	-	**4443**	**100**
Mean	5098	-	5098	
C.V. (%)	11	-	11	
LSD (0.05)	828	-	828	

Table 2.2. 12 Nipawin Timothy 1999

1999 Timothy WF trial
Nipawin, SK
Re-sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Climax
GPT18905	5610	-	5610	100
Climax	**5586**	**-**	**5586**	**100**
GPT18906	4476	-	4476	80
Mean	5224	-	5224	
C.V. (%)	7	-	7	
LSD (0.05)	662	-	662	

Note: This trial failed to establish in 1999 and was re-established in 2000.

Table 2.2. 13 Nipawin Timothy 1998

1998 Timothy
Nipawin, SK
9805

Variety	1999		2000		2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jollette	4308	5208	8060	8060	2672	2672	5013	5316	111
Bor72002	3171	3830	8571	8571	2666	2666	4803	5022	104
Climax	**3783**	**4168**	**8069**	**8069**	**2202**	**2202**	**4684**	**4810**	**100**
Bor94301	3709	4324	7632	7632	2359	2359	4567	4772	99
Mean	3743	4382	8083	8083	2475	2475	4767	4980	
C.V. (%)	10	9	2	2	11	11		9	
LSD (0.05)	572	620	304	304	453	453		ns	

Table 2.2. 12 Nipawin Timothy 1999

1999 Timothy WF trial
Nipawin, SK
Re-sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Climax
GPT18905	5610	-	5610	100
Climax	**5586**	**-**	**5586**	**100**
GPT18906	4476	-	4476	80
Mean	5224	-	5224	
C.V. (%)	7	-	7	
LSD (0.05)	662	-	662	

Note: This trial failed to establish in 1999 and was re-established in 2000.

Table 2.2. 13 Nipawin Timothy 1998

1998 Timothy
Nipawin, SK
9805

Variety	1999		2000		2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jollette	4308	5208	8060	8060	2672	2672	5013	5316	111
Bor72002	3171	3830	8571	8571	2666	2666	4803	5022	104
Climax	**3783**	**4168**	**8069**	**8069**	**2202**	**2202**	**4684**	**4810**	**100**
Bor94301	3709	4324	7632	7632	2359	2359	4567	4772	99
Mean	3743	4382	8083	8083	2475	2475	4767	4980	
C.V. (%)	10	9	2	2	11	11		9	
LSD (0.05)	572	620	304	304	453	453		ns	

Table 2.2. 14 Nipawin Timothy 1996

1996 Timothy
Nipawin, SK
9604

Variety	1997		1998		1999		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/99	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	**7410**	**7946**	**3865**	**5143**	**7043**	**7043**	**6106**	**6711**	**100**
BOR1342	8110	8551	3981	5173	5785	5785	5959	6503	97
BOR94322	8170	8564	3846	5696	5221	5221	5746	6494	97
AC Alliance	6826	7737	3095	5127	4425	4425	4782	5763	86
UGG1703	6675	7459	3119	4835	3919	3919	4571	5404	81
Mean	7438	8051	3581	5195	5279	5279	5433	6175	
C.V. (%)	4	4	8	10	9	9		7	
LSD (0.05)	453	456	462	ns	733	733		1251	

Table 2.2. 15 Nipawin Timothy, Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchardgrass and Meadow Foxtail
Nipawin, SK
Test 9575

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jay orchardgrasss	7955	10119	6914	7520	2994	5166	1281	1252	4079	5068	130
Kay orchardgrass	7002	8809	6548	7270	3069	5093	1014	1227	3772	4683	120
UGG 1701 timothy	6571	8056	5288	5702	1953	4022	3797	738	3669	4463	114
Tuuka timothy	6251	7062	7494	7775	2407	3833	836	1429	3683	4187	107
Hakaorchardgrass	6975	8456	5130	5692	2577	4524	1023	1223	3385	4184	107
Bor 80102 timothy	6434	7399	7266	7549	2294	3987	1010	868	3574	4162	107
UGG 1702 timothy	6719	7739	7215	7497	2197	3616	1107	839	3615	4160	107
Mountain meadow foxtail	4852	6546	5223	5816	2732	4867	1170	1419	3079	3964	102
Climax timothy	**5901**	**7655**	**4974**	**5438**	**1958**	**4323**	**960**	**1143**	**2987**	**3904**	**100**
PS 951 orchardgrass	6448	7882	4782	5267	2448	4280	973	1008	3132	3373	99
Dan meadow foxtail	4436	6494	4646	5053	2699	4898	1812	1025	2924	3856	99
Roughrider orchardgrass	4614	6201	3589	4295	2170	4147	1587	904	2573	3427	88
Mean	6180	7702	5756	6239	2458	4396	1381	1089	3373	4161	
C.V. (%)	16	16	20	18	14	11	23	39			
LSD (0.05)	1246	1530	1440	1471	439	626	462	548			

Table 2.2. 14 Nipawin Timothy 1996

1996 Timothy
Nipawin, SK
9604

Variety	1997		1998		1999		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/99	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	**7410**	**7946**	**3865**	**5143**	**7043**	**7043**	**6106**	**6711**	**100**
BOR1342	8110	8551	3981	5173	5785	5785	5959	6503	97
BOR94322	8170	8564	3846	5696	5221	5221	5746	6494	97
AC Alliance	6826	7737	3095	5127	4425	4425	4782	5763	86
UGG1703	6675	7459	3119	4835	3919	3919	4571	5404	81
Mean	7438	8051	3581	5195	5279	5279	5433	6175	
C.V. (%)	4	4	8	10	9	9		7	
LSD (0.05)	453	456	462	ns	733	733		1251	

Table 2.2. 15 Nipawin Timothy, Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchardgrass and Meadow Foxtail
Nipawin, SK
Test 9575

Variety	1996		1997		1998		2000	2001	5 Year Average		
	Cut#1 Forage Yield (kg DM/ha) July 17/1996	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 23/1997	Total Forage Yield (kg DM/ha)	Cut#1 Forage Yield (kg DM/ha) July 15/1998	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha) Aug 2/2001	Cut#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Jay orchardgrasss	7955	10119	6914	7520	2994	5166	1281	1252	4079	5068	130
Kay orchardgrass	7002	8809	6548	7270	3069	5093	1014	1227	3772	4683	120
UGG 1701 timothy	6571	8056	5288	5702	1953	4022	3797	738	3669	4463	114
Tuuka timothy	6251	7062	7494	7775	2407	3833	836	1429	3683	4187	107
Hakaorchardgrass	6975	8456	5130	5692	2577	4524	1023	1223	3385	4184	107
Bor 80102 timothy	6434	7399	7266	7549	2294	3987	1010	868	3574	4162	107
UGG 1702 timothy	6719	7739	7215	7497	2197	3616	1107	839	3615	4160	107
Mountain meadow foxtail	4852	6546	5223	5816	2732	4867	1170	1419	3079	3964	102
Climax timothy	**5901**	**7655**	**4974**	**5438**	**1958**	**4323**	**960**	**1143**	**2987**	**3904**	**100**
PS 951 orchardgrass	6448	7882	4782	5267	2448	4280	973	1008	3132	3373	99
Dan meadow foxtail	4436	6494	4646	5053	2699	4898	1812	1025	2924	3856	99
Roughrider orchardgrass	4614	6201	3589	4295	2170	4147	1587	904	2573	3427	88
Mean	6180	7702	5756	6239	2458	4396	1381	1089	3373	4161	
C.V. (%)	16	16	20	18	14	11	23	39			
LSD (0.05)	1246	1530	1440	1471	439	626	462	548			

Table 2.2. 16 Nipawin Crested Wheatgrass 1999

Crested Wheatgrass Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	**10648**	**12237**	**8466**	**-**	**8466**	**10352**	**100**
Vavilov	6498	7949	5391	-	5391	6670	64
Douglas	6346	6816	4374	-	4374	5595	54
Mean	7831	9001	6077	-	6077	7539	
C.V. (%)	16	17	10	-	10	16	
LSD (0.05)	2176	2643	1096	-	1096	2240	

Table 2.2. 17 Nipawin Crested Wheatgrass 1997

Crested Wheatgrass
Nipawin, SK
9701

Variety	1998		1999		2000		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
S-9240	4760	6402	7744	7744	5918	5918	6140	6688	106
CD 2	4339	6034	7650	7650	5543	5543	5844	6409	102
Kirk	**4446**	**6040**	**7356**	**7356**	**5466**	**5466**	**5756**	**6287**	**100**
Mean	4515	6159	7584	7584	5642	5642	5914	6462	
C.V. (%)	7	6	2	2	10	10		6	
LSD (0.05)	ns	ns	298	298	ns	ns		ns	

Table 2.2. 16 Nipawin Crested Wheatgrass 1999

Crested Wheatgrass Variety Trials
Nipawin, SK
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	**10648**	**12237**	**8466**	**-**	**8466**	**10352**	**100**
Vavilov	6498	7949	5391	-	5391	6670	64
Douglas	6346	6816	4374	-	4374	5595	54
Mean	7831	9001	6077	-	6077	7539	
C.V. (%)	16	17	10	-	10	16	
LSD (0.05)	2176	2643	1096	-	1096	2240	

Table 2.2. 17 Nipawin Crested Wheatgrass 1997

Crested Wheatgrass
Nipawin, SK
9701

Variety	1998		1999		2000		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 23/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
S-9240	4760	6402	7744	7744	5918	5918	6140	6688	106
CD 2	4339	6034	7650	7650	5543	5543	5844	6409	102
Kirk	**4446**	**6040**	**7356**	**7356**	**5466**	**5466**	**5756**	**6287**	**100**
Mean	4515	6159	7584	7584	5642	5642	5914	6462	
C.V. (%)	7	6	2	2	10	10		6	
LSD (0.05)	ns	ns	298	298	ns	ns		ns	

Table 2.2. 18 Nipawin Orchardgrass 1998

Orchardgrass
Nipawin, SK
9804

Variety	1999		2000	2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 10/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
OG96-1	2988	4073	6022	3293	-	3293	4101	4463	114
Kay	**1699**	**2650**	**6140**	**2962**	**-**	**2962**	**3600**	**3917**	**100**
OG96-3	581	1226	4988	2499	-	2499	2689	2904	74
OG96-2	957	1624	4457	2023	-	2023	2889	2702	69
OFI 93L	582	582	2569	1574	-	1574	1575	1575	40
Mean	1361	2031	4835	2470	-	2470	2889	3112	
C.V. (%)	35	30	14	28	-	28		21	
LSD (0.05)	726	935	1034	1080	-	1080		1086	

Table 2.2. 19 Nipawin Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Nipawin, SK
Test 9573

Variety	1996		1997		1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 05/23/98	CUT#2 Forage Yield (kg DM/ha) 07/10/1994	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
Courtenay tall fescue	**6556**	**8385**	**4400**	**4400**	**2149**	**3181**	**5329**	**4368**	**6038**	**100**
MCF101 tall fescue	5655	7430	3875	3875	2011	2790	4801	3847	5369	89
Retu tall fescue	5094	6734	3728	3728	1956	3269	5225	3593	5229	87
PS952 meadow fescue	6330	7523	3398	3398	1665	1980	3646	3798	4856	80
Ensign meadow fescue	5538	7084	3959	3959	1533	1921	3454	3677	4832	80
Boreale creeping red fescue	5506	6709	3546	3546	1689	1240	2929	3580	4395	73
PS953 creeping red fescue	5480	6177	3936	3936	1984	838	2821	3800	4311	71
UGG1501 tall fescue	4411	5599	2501	2501	901	1786	2687	2604	3595	60
Norlea perennial ryegrass	1151	1668	224	224	-	-	-	-	-	-
UGG 1401 perennial ryegrass	2041	2787	-	-	-	-	-	-	-	-
MEAN	4776	6010	3285	3285	1736	2166	3862	3658	4828	
CV(%)	30	26	17	17	22	22	20		20	
LSD	1833	1990	725	725	502	617	978		950	

Table 2.2. 18 Nipawin Orchardgrass 1998

Orchardgrass
Nipawin, SK
9804

Variety	1999		2000	2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 10/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 20/2000	CUT#1 Forage Yield (kg DM/ha) July 5/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
OG96-1	2988	4073	6022	3293	-	3293	4101	4463	114
Kay	**1699**	**2650**	**6140**	**2962**	**-**	**2962**	**3600**	**3917**	**100**
OG96-3	581	1226	4988	2499	-	2499	2689	2904	74
OG96-2	957	1624	4457	2023	-	2023	2889	2702	69
OFI 93L	582	582	2569	1574	-	1574	1575	1575	40
Mean	1361	2031	4835	2470	-	2470	2889	3112	
C.V. (%)	35	30	14	28	-	28		21	
LSD (0.05)	726	935	1034	1080	-	1080		1086	

Table 2.2. 19 Nipawin Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Nipawin, SK
Test 9573

Variety	1996		1997		1998			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 8/1996	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/1997	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 05/23/98	CUT#2 Forage Yield (kg DM/ha) 07/10/1994	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
Courtenay tall fescue	**6556**	**8385**	**4400**	**4400**	**2149**	**3181**	**5329**	**4368**	**6038**	**100**
MCF101 tall fescue	5655	7430	3875	3875	2011	2790	4801	3847	5369	89
Retu tall fescue	5094	6734	3728	3728	1956	3269	5225	3593	5229	87
PS952 meadow fescue	6330	7523	3398	3398	1665	1980	3646	3798	4856	80
Ensign meadow fescue	5538	7084	3959	3959	1533	1921	3454	3677	4832	80
Boreale creeping red fescue	5506	6709	3546	3546	1689	1240	2929	3580	4395	73
PS953 creeping red fescue	5480	6177	3936	3936	1984	838	2821	3800	4311	71
UGG1501 tall fescue	4411	5599	2501	2501	901	1786	2687	2604	3595	60
Norlea perennial ryegrass	1151	1668	224	224	-	-	-	-	-	-
UGG 1401 perennial ryegrass	2041	2787	-	-	-	-	-	-	-	-
MEAN	4776	6010	3285	3285	1736	2166	3862	3658	4828	
CV(%)	30	26	17	17	22	22	20		20	
LSD	1833	1990	725	725	502	617	978		950	

2.3 Tisdale

Yield and Quality Table Index

Year of Seeding	Species	Years of Data Collection	Table
1997	Alfalfa	1998-2000	2.3.1
1999	Sask. Dehy. Alfalfa	2000-2001	2.3.2
1998	Sask. Dehy. Alfalfa	2000-2001	2.3.3
1998	Alfalfa	2000-2001	2.3.4
1999	Alfalfa	2000-2001	2.3.5

Rainfall for this area was well below normal in 2001 (table A.1). The 30-year average rainfall for this area is 400 mm. However, Tisdale and Melfort only received 197 mm from January to December 2001. Air temperatures were also slightly higher than normal over the growing season.

Each year new forage variety trials are established at these sites. When looking at the data from the trials established after 1998 or data tables for trials with less than three years of data, please use caution in the interpretation of the results. In general, three years of data are required before the results can be interpreted with confidence.

The data from the 1997 alfalfa trials at this location indicate that when the data were averaged over the three years of 1998 to 2000, Anchor and the new cultivars Proleaf and True North (ABI 9141) yielded 104% of beaver (table 2.3.1). In trials established for the Saskatchewan Dehy. Association in 1998, True North yielded 107% of beaver, over a two-year period (table 2.3.4). On the other hand, beaver yielded higher than all other varieties tested in a similar trial over the same period (table 2.3.2). Please use caution interpreting the results from these trials.

Table 2.3. 1 Tisdale Alfalfa WFT 1997

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown May 1997

Variety	1998		1999		2000			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 17/2000	CUT#2 Forage Yield (kg DM/ha) Sept. 25/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	4187	8364	4187	9050	5801	2065	7866	4725	8427	104
Proleaf	3880	9124	3880	8878	5269	1911	7180	4343	8394	104
ABI 9141	3608	9415	3608	8424	5337	2002	7339	4184	8393	104
Beaver	**4210**	**8416**	**4210**	**8821**	**5397**	**1681**	**7078**	**4605**	**8105**	**100**
Rambler	4139	8113	4139	8397	5427	2075	7502	4568	8004	99
SF 9001	3640	8973	3640	8558	4495	1957	6452	3925	7995	99
Quatro HR	3264	9134	3264	8169	5606	837	6443	4044	7915	98
PVN 1207	4140	7929	4140	8520	4851	2143	6994	4377	7814	96
NS 3317	3415	8160	3415	8030	4925	2142	7067	3918	7752	96
97 CR1	3834	8228	3834	8355	4567	1886	6454	4078	7679	95
X53V08	4119	7696	4119	8518	5219	1435	6654	4486	7623	94
PVN 1209	3562	7958	3562	7963	4851	2048	6899	3991	7607	94
Haygrazer	3115	8058	3115	7780	4651	2165	6816	3627	7551	93
PVN 1208	3558	8159	3558	7895	4729	1774	6503	3949	7519	93
Spur	3482	8365	3482	7851	4280	1833	6113	3748	7443	92
MEAN	3743	8406	3743	8347	5027	1864	6890	4171	7881	
C.V. (%)	12	10	12	8	9	13	9		9	
LSD(0.05)	ns	ns	642	ns	638	334	885		657	

Table 2.3. 1 Tisdale Alfalfa WFT 1997

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown May 1997

Variety	1998		1999		2000			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 17/2000	CUT#2 Forage Yield (kg DM/ha) Sept. 25/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	4187	8364	4187	9050	5801	2065	7866	4725	8427	104
Proleaf	3880	9124	3880	8878	5269	1911	7180	4343	8394	104
ABI 9141	3608	9415	3608	8424	5337	2002	7339	4184	8393	104
Beaver	**4210**	**8416**	**4210**	**8821**	**5397**	**1681**	**7078**	**4605**	**8105**	**100**
Rambler	4139	8113	4139	8397	5427	2075	7502	4568	8004	99
SF 9001	3640	8973	3640	8558	4495	1957	6452	3925	7995	99
Quatro HR	3264	9134	3264	8169	5606	837	6443	4044	7915	98
PVN 1207	4140	7929	4140	8520	4851	2143	6994	4377	7814	96
NS 3317	3415	8160	3415	8030	4925	2142	7067	3918	7752	96
97 CR1	3834	8228	3834	8355	4567	1886	6454	4078	7679	95
X53V08	4119	7696	4119	8518	5219	1435	6654	4486	7623	94
PVN 1209	3562	7958	3562	7963	4851	2048	6899	3991	7607	94
Haygrazer	3115	8058	3115	7780	4651	2165	6816	3627	7551	93
PVN 1208	3558	8159	3558	7895	4729	1774	6503	3949	7519	93
Spur	3482	8365	3482	7851	4280	1833	6113	3748	7443	92
MEAN	3743	8406	3743	8347	5027	1864	6890	4171	7881	
C.V. (%)	12	10	12	8	9	13	9		9	
LSD(0.05)	ns	ns	642	ns	638	334	885		657	

Table 2.3. 2 Tisdale Dehy. Alfalfa 1999

Sask. Dehy. Alfalfa
Tisdale, Sask.
May-99

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg [illegible]	CUT#1 Forage Yield [illegible] DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Beaver	**5305**	**7207**	**2751**	**3124**	[illegible]	[illegible]	**6541**	**100**
UGG Gala	5072	6667	2613	3059	5672	3843	6169	94
Magnum III Wet	5939	7312	2174	2629	4803	4056	6057	93
Algonquin	5320	7003	2259	2833	5091	3789	6047	92
AC Nordica	4890	6462	2286	3157	5444	3588	5953	91
AC Caribou	4715	6341	2752	2766	5518	3733	5929	91
Forerunner	5668	7200	1938	2619	4557	3803	5878	90
OAC Minto	4987	6778	2288	2657	4945	3637	5862	90
AC Blue Jay	5122	6490	1857	2752	4609	3489	5549	85
Peace	4787	6557	1485	2926	4410	3136	5484	84
MEAN	5180	6802	2240	2852	5092	3710	5947	
C.V. (%)	13	12	17	11	11		12	
LSD(0.05)	983	ns	567	459	783		ns	

Table 2.3. 3 Tisdale Dehy Alfalfa Trial 1998

Sask. Dehy. Alfalfa
Tisdale, Sask.
Sown August 1998

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
True North	5675	8567	2550	3429	5979	4113	7273	107
Arrow	5696	8330	2775	3075	5850	4236	7090	104
Millenium	5540	8450	2450	3181	5630	3995	7040	104
PS8920MF	5708	8074	2701	3259	5960	4204	7017	103
Beaver	**5825**	**8016**	**2407**	**3171**	**5578**	**4116**	**6797**	**100**
Avenger	5166	7765	2609	3106	5714	3887	6740	99
PS8925MF	5390	8048	2363	3058	5420	3876	6734	99
Apica	4927	7510	2400	3215	5615	3664	6562	97
MEAN	2604	8095	2532	3187	5718	4011	6907	
C.V. (%)	9	8	12	10	9		9	
LSD(0.05)	745	956	ns	ns	ns		ns	

Table 2.3. 2 Tisdale Dehy. Alfalfa 1999

Sask. Dehy. Alfalfa
Tisdale, Sask.
May-99

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Beaver	5305	7207	2751	3124	5874	4028	6541	100
UGG Gala	5072	6667	2613	3059	5672	3843	6169	94
Magnum III Wet	5939	7312	2174	2629	4803	4056	6057	93
Algonquin	5320	7003	2259	2833	5091	3789	6047	92
AC Nordica	4890	6462	2286	3157	5444	3588	5953	91
AC Caribou	4715	6341	2752	2766	5518	3733	5929	91
Forerunner	5668	7200	1938	2619	4557	3803	5878	90
OAC Minto	4987	6778	2288	2657	4945	3637	5862	90
AC Blue Jay	5122	6490	1857	2752	4609	3489	5549	85
Peace	4787	6557	1485	2926	4410	3136	5484	84
MEAN	5180	6802	2240	2852	5092	3710	5947	
C.V. (%)	13	12	17	11	11		12	
LSD(0.05)	983	ns	567	459	783		ns	

Table 2.3. 3 Tisdale Dehy Alfalfa Trial 1998

Sask. Dehy. Alfalfa
Tisdale, Sask.
Sown August 1998

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
True North	5675	8567	2550	3429	5979	4113	7273	107
Arrow	5696	8330	2775	3075	5850	4236	7090	104
Millenium	5540	8450	2450	3181	5630	3995	7040	104
PS8920MF	5708	8074	2701	3259	5960	4204	7017	103
Beaver	**5825**	**8016**	**2407**	**3171**	**5578**	**4116**	**6797**	**100**
Avenger	5166	7765	2609	3106	5714	3887	6740	99
PS8925MF	5390	8048	2363	3058	5420	3876	6734	99
Apica	4927	7510	2400	3215	5615	3664	6562	97
MEAN	2604	8095	2532	3187	5718	4011	6907	
C.V. (%)	9	8	12	10	9		9	
LSD(0.05)	745	956	ns	ns	ns		ns	

Table 2.3. 4 Tisdale Alfalfa WFT 1998

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown August 1998

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
CW 5302	5948	8775	3789	3225	7014	4868	7894	115
R801	5736	8980	3349	3357	6706	4543	7843	114
Rambler	5529	8286	3276	3132	6408	4402	7347	107
CW 5440	5756	8210	3406	3072	6478	4581	7344	107
4321	5714	8177	3253	2918	6171	4483	7174	104
5301	5410	8027	3273	2860	6134	4341	7080	103
ZG 9721	5100	7939	3239	2878	6117	4170	7028	102
Beaver	5089	7554	2977	3202	6179	4033	6866	100
WL 232 HQ	5291	7706	2928	2806	5734	4110	6720	98
Anchor	5246	7646	3000	2608	5608	4123	6627	97
ZG 9711C	4998	7652	3071	2519	5590	4035	6621	96
Spredor GT	5444	7771	3045	2254	5299	4244	6535	95
53Q60	4791	6996	2823	2674	5497	3807	6247	91
MEAN	5389	7978	3187	2885	6072	4288	7025	
C.V. (%)	16	14	22	21	19		16	
LSD(0.05)	ns	ns	ns	864	1650		449	

Table 2.3. 5 Tisdale Alfalfa WFT 1999

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Beaver	**5949**	**9479**	**2125**	**2656**	**4781**	**4037**	**7130**	**100**
DS 9923	6527	9494	2133	2424	4557	4330	7025	99
2065 MF	6864	9491	1992	2518	4511	4428	7001	98
DS 9925	6731	9332	1954	2623	4578	4342	6955	98
Rambler	6645	8966	1688	3226	4914	4166	6940	97
3030	6646	9805	1726	2316	4042	4186	6923	97
C227	6552	9042	2296	2468	4764	4424	6903	97
CW 6408	6599	9289	1796	2619	4415	4198	6852	96
R922	6142	8681	2233	2710	4943	4187	6812	96
Gibralter	6576	8974	2127	2388	4516	4352	6745	95
DS 9929	6102	8704	1980	2628	4608	4041	6656	93
DS 9924	6340	8656	2156	2484	4640	4248	6648	93
4241	6506	8623	2340	2170	4509	4423	6566	92
ZG 9831	6152	8728	1929	2439	4368	4040	6548	92
Geneva	6154	8636	2042	2305	4347	4098	6492	91
R923	5877	8548	2116	2277	4393	3997	6471	91
SL 9902	6464	8755	1969	2113	4082	4216	6419	90
SL 9900	5831	8045	2048	2542	4590	3940	6318	89
SL 9901	6087	8439	1909	2254	4163	3998	6301	88
C304	6124	8468	1908	2204	4112	4016	6290	88
CW 4223	6259	8299	2063	2195	4258	4161	6279	88
DS 9927	6175	8412	1908	2232	4140	4042	6276	88
Anchor	6289	8584	1644	2198	3842	3967	6213	87
DS 9928	5864	8143	1878	2249	4127	3871	6135	86
MEAN	6311	8816	1998	2427	4425	4154	6621	
C.V. (%)	13	12	16	13	12		10	
LSD(0.05)	ns	ns	463	452	771		701	

Table 2.3. 4 Tisdale Alfalfa WFT 1998

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown August 1998

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
CW 5302	5948	8775	3789	3225	7014	4868	7894	115
R801	5736	8980	3349	3357	6706	4543	7843	114
Rambler	5529	8286	3276	3132	6408	4402	7347	107
CW 5440	5756	8210	3406	3072	6478	4581	7344	107
4321	5714	8177	3253	2918	6171	4483	7174	104
5301	5410	8027	3273	2860	6134	4341	7080	103
ZG 9721	5100	7939	3239	2878	6117	4170	7028	102
Beaver	**5089**	**7554**	**2977**	**[illegible]202**	**6179**	**4033**	**6866**	**100**
WL 232 HQ	5291	7706	2928	2806	5734	4110	6720	98
Anchor	5246	7646	3000	2608	5608	4123	6627	97
ZG 9711C	4998	7652	3071	2519	5590	4035	6621	96
Spredor GT	5444	7771	3045	2254	5299	4244	6535	95
53Q60	4791	6996	2823	2674	5497	3807	6247	91
MEAN	5389	7978	3187	2885	6072	4288	7025	
C.V. (%)	16	14	22	21	19		16	
LSD(0.05)	ns	ns	ns	864	1650		449	

Table 2.3.5 Tisdale Alfalfa WFT 1999

Alfalfa Variety Adaptation Test
Tisdale, Sask.
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 17/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 22/2001	CUT#2 Forage Yield (kg DM/ha) Aug 2/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Beaver	**5949**	**9479**	**2125**	**2656**	**4781**	**4037**	**7130**	**100**
DS 9923	6527	9494	2133	2424	4557	4330	7025	99
2065 MF	6864	9491	1992	2518	4511	4428	7001	98
DS 9925	6731	9332	1954	2623	4578	4342	6955	98
Rambler	6645	8966	1688	3226	4914	4166	6940	97
3030	6646	9805	1726	2316	4042	4186	6923	97
C227	6552	9042	2296	2468	4764	4424	6903	97
CW 6408	6599	9289	1796	2619	4415	4198	6852	96
R922	6142	8681	2233	2710	4943	4187	6812	96
Gibralter	6576	8974	2127	2388	4516	4352	6745	95
DS 9929	6102	8704	1980	2628	4608	4041	6656	93
DS 9924	6340	8656	2156	2484	4640	4248	6648	93
4241	6506	8623	2340	2170	4509	4423	6566	92
ZG 9831	6152	8728	1929	2439	4368	4040	6548	92
Geneva	6154	8636	2042	2305	4347	4098	6492	91
R923	5877	8548	2116	2277	4393	3997	6471	91
SL 9902	6464	8755	1969	2113	4082	4216	6419	90
SL 9900	5831	8045	2048	2542	4590	3940	6318	89
SL 9901	6087	8439	1909	2254	4163	3998	6301	88
C304	6124	8468	1908	2204	4112	4016	6290	88
CW 4223	6259	8299	2063	2195	4258	4161	6279	88
DS 9927	6175	8412	1908	2232	4140	4042	6276	88
Anchor	6289	8584	1644	2198	3842	3967	6213	87
DS 9928	5864	8143	1878	2249	4127	3871	6135	86
MEAN	6311	8816	1998	2427	4425	4154	6621	
C.V. (%)	13	12	16	13	12		10	
LSD(0.05)	ns	ns	463	452	771		701	

2.4 Canora

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
1998	Alfalfa	1999-2001	2.4.1
1998	Red Clover	1999-2001	2.4.2
1998	Orchardgrass	1999-2001	2.4.3
1998	Timothy	1999-2001	2.4.4
1999	WF Westerwolds Ryegrass	1999-2000	2.4.5
1999	Alfalfa	2000-2001	2.4.6
1999	Clovers	2000-2001	2.4.7
1999	Kentucky Bluegrass	2000-2001	2.4.8
1999	Timothy	2000-2001	2.4.9
1999	Crested Wheatgrass	2000	2.4.10
1999	Bromegrass	2000-2001	2.4.11
1998	SFC Italian Ryegrass	1998 and 2000	2.4.12
1998	SFC Westerwolds Ryegrass	1998-2000	2.4.13
1998	Wheat/Triticale	1998-2000	2.4.14
1998	Quality for Wheat/Triticale	1998-2000	2.4.15
1998	Oat	1998-2000	2.4.16
1998	Quality for Oat	1998-2000	2.4.17
1998	Barley	1998-2000	2.4.18
1998	Quality for Barley	1998-2000	2.4.19
1998	Cereal Forage Summary Table	1998-2000	2.4.20
2000	Alfalfa	2001	2.4.21
2000	Timothy	2001	2.4.22

Each year new forage variety trials are established at this site. When looking at the data for trials established after 1998, or at the data on trials that have less than three-years of data please use caution in the interpretation of the results. In general, three years of data are required before there is sufficient confidence in the overall results for each trial.

Please refer to table A.2 in appendix A for the weather data for the Yorkton/Canora areas. Air temperature was generally normal when compared to the thirty-year long-term average. In addition, the precipitation over the past 4 years was above normal except in 2001 where the mean precipitation was slight below normal.

The Canora site was established in 1998. Over this time-period, the SFC has established more than 22 experimental forage trials at this location. The data presented here details the results from those trials.

In the 1998 alfalfa trials, ten of the ten new forage cultivars yielded greater than or equal to beaver alfalfa when the data are average over the three years of the study (table 2.4.1). Of these new cultivars, CW5302, CW5440 and 53Q60 yielded 119, 119 and 117% of beaver respectively. This indicates a vast improvement in potential forage yield over beaver.

In the Red Clover trial established in 1998, Gorby and Wildcat yielded 116 and 109% Altaswede (table 2.4.2).

In 1998, four new Orchardgrass cultivars were established at Canora to be evaluated for adaptability and forage yield (table 2.4.3). When the data were averaged over all three years of the study, Kay yielded 102, 107, 108 and 124% of the experimental cultivars OG96-1, OG96-3, OG96-2 and OFI 93L, respectively.

In 1998, three new timothy cultivars were tested at Canora for comparison with the standard timothy variety Climax (table 2.4.4). Joliette out-yielded Climax by 18 percent when the data are averaged over three years.

Italian and Westerwolds annual ryegrass were established each year from 1998 through to 2001. In 1999, the Italian ryegrasses was washed out of the ground due to the extreme rainfalls the occurred in June and July of that year. In 2001, the Italian ryegrass failed to establish due to severe drought conditions and a high weed pressure. However, the data collected from 1998 and 2000 indicates that Maris Ledger (the check variety) appears to have higher yielding potential than the new Italian ryegrass cultivars tested (table 2.4.12). Barrextra yielded 92% of Maris Ledger.

Our success at growing Westerwolds annual ryegrass was much better than with the Italian ryegrasses. This is largely because the Westerwolds annual ryegrasses have a much more upright growth habit than the Italian types and produce seed heads in the year of establishment. This results in much greater competition for light for lower growing weedy species. On the other hand, the canopy of Italian ryegrass remains open much longer and allows weedy species development throughout a much larger portion of the growing season. Weed control in the first six weeks after seeding is critical for a producer who considers growing annual ryegrass. The westerwolds annual ryegrass trials failed to establish in 2001 due to the severe drought conditions that prevailed over much of Saskatchewan in 2001.

Barspectra and Magnum Westerwolds annual ryegrass yielded 105 and 104% of Agraco respectively when the data were averaged over two years, respectively (table 2.4.13). Similar results occurred when the data were average over three years.

Frank Triticale yielded 105% of CDC Teal (HRW) when the data were averaged over three years (table 2.4.14). The quality was similar between varieties (table 2.4.15).

CDC Pacer oat yielded 101% of CDC Bell, which yielded similar to Baler (S093806) when the data were combined over all three years (table 2.4.16). The forage quality was similar between varieties (table 2.4.17).

AC Rosser and Virden barley showed similar forage yield potentials, with AC Rosser yielding 101% of Virden (table 2.4 18). Forage quality was similar between varieties tested (table 2.4.19)

The overall the results indicate that AC Rosser and Virden tended to have the higher forage yield when the data were compared to all the other annual forage cereal varieties and cultivars tested (table 2.4.20).

Table 2.4. 1 Canora Alfalfa 1999

1999 Alfalfa Variety Adaptation Test
Canora, SK.
Sown May 14, 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	8066	13859	7638	17005	5359	3341	8700	7021	13188	121
CW 5302	7878	13593	7556	17383	4974	3195	8169	6803	13048	119
CW 5440	8753	14308	7631	17019	4601	3008	7609	6995	12979	119
53Q60	7733	13533	7511	16980	5049	2680	7729	6764	12747	117
Spredor GT	7374	12867	7341	16608	5090	2367	7457	6601	12311	113
4321	7813	13070	6891	16130	4115	2563	6679	6273	11959	110
ZG 9721	7696	13306	7132	15042	4787	2418	7204	6538	11851	109
ZG 9711C	7827	12988	6970	14266	4462	2180	6643	6420	11299	103
WL 232HQ	7065	12517	6059	13333	4467	2666	7133	5864	10995	101
5301	7313	13080	6288	14026	3671	2127	5798	5757	10968	100
Beaver	**7075**	**12148**	**6655**	**14378**	**3919**	**2312**	**6231**	**5883**	**10919**	**100**
R801	7333	12318	6510	13821	4361	2130	6491	6068	10877	100
Rambler	6568	10531	6477	11170	2909	934	3844	5318	8515	78
MEAN	7576	12932	6974	15166	4443	2456	6899	6331	11666	
C.V. (%)	10	7	8	11	13	18	13		10	
LSD(0.05)	ns	1355	842	2287	817	631	1297		1133	

Table 2.4. 1 Canora Alfalfa 1999

1999 Alfalfa Variety Adaptation Test
Canora, SK.
Sown May 14, 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
Anchor	8066	13859	7638	17005	5359	3341	8700	7021	13188	121
CW 5302	7878	13593	7556	17383	4974	3195	8169	6803	13048	119
CW 5440	8753	14308	7631	17019	4601	3008	7609	6995	12979	119
53Q60	7733	13533	7511	16980	5049	2680	7729	6764	12747	117
Spredor GT	7374	12867	7341	16608	5090	2367	7457	6601	12311	113
4321	7813	13070	6891	16130	4115	2563	6679	6273	11959	110
ZG 9721	7696	13306	7132	15042	4787	2418	7204	6538	11851	109
ZG 9711C	7827	12988	6970	14266	4462	2180	6643	6420	11299	103
WL 232HQ	7065	12517	6059	13333	4467	2666	7133	5864	10995	101
5301	7313	13080	6288	14026	3671	2127	5798	5757	10968	100
Beaver	**7075**	**12148**	**6655**	**14378**	**3919**	**2312**	**6231**	**5883**	**10919**	**100**
R801	7333	12318	6510	13821	4361	2130	6491	6068	10877	100
Rambler	6568	10531	6477	11170	2909	934	3844	5318	8515	78
MEAN	7576	12932	6974	15166	4443	2456	6899	6331	11666	
C.V. (%)	10	7	8	11	13	18	13		10	
LSD(0.05)	ns	1355	842	2287	817	631	1297		1133	

Table 2.4. 2 Canora Clover 1999

1999 Red Clover Variety Adaptation Test
Canora, SK
Sown May 14, 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Gorby	10192	14869	5662	7105	2616	822	3437	6157	8470	116
Wildcat	7130	12688	5100	7820	2251	1046	3296	4827	7935	109
Altaswede	**8869**	**11919**	**6020**	**6983**	**2452**	**487**	**2939**	**5780**	**7280**	**100**
MEAN	8730	13159	5594	7302	2439	785	3224	5588	7895	
C.V. (%)	5	5	8	8	12	42	15		7	
LSD(0.05)	749	1068	ns	ns	ns	ns	ns		ns	

Table 2.4. 3 Canora Orchardgrass 1998

Orchardgrass
Canora, SK
Sown May 14, 1998

Variety	1999			2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Kay	**2689**	**6424**	**5694**	**6067**	**6067**	**4817**	**6062**	**100**
OG96-1	2258	5525	5639	6714	6714	4870	5959	98
OG96-3	2538	6227	5741	5048	5048	4442	5672	94
OG96-2	2460	5627	5805	5339	5339	4534	5590	92
OFI 93L	2322	6332	3474	4877	4877	3557	4894	81
Mean	2453	6027	5270	5609	5609	4444	5635	
C.V. (%)	13	18	9	8	8		13	
LSD (0.05)	ns	ns	745	649	649		ns	

Table 2.4. 2 Canora Clover 1999

1999 Red Clover Variety Adaptation Test
Canora, SK
Sown May 14, 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Gorby	10192	14869	5662	7105	2616	822	3437	6157	8470	116
Wildcat	7130	12688	5100	7820	2251	1046	3296	4827	7935	109
Altaswede	8869	11919	6020	6983	2452	487	2939	5780	7280	100
MEAN	8730	13159	5594	7302	2439	785	3224	5588	7895	
C.V. (%)	5	5	8	8	12	42	15		7	
LSD(0.05)	749	1068	ns	ns	ns	ns	ns		ns	

Table 2.4. 3 Canora Orchardgrass 1998

Orchardgrass
Canora, SK
Sown May 14, 1998

Variety	1999			2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Kay	**2689**	**6424**	**5694**	**6067**	**6067**	**4817**	**6062**	**100**
OG96-1	2258	5525	5639	6714	6714	4870	5959	98
OG96-3	2538	6227	5741	5048	5048	4442	5672	94
OG96-2	2460	5627	5805	5339	5339	4534	5590	92
OFI 93L	2322	6332	3474	4877	4877	3557	4894	81
Mean	2453	6027	5270	5609	5609	4444	5635	
C.V. (%)	13	18	9	8	8		13	
LSD (0.05)	ns	ns	745	649	649		ns	

Table 2.4. 4 Canora Timothy 1998

Timothy Variety Adaptation Test
Canora, SK.
Sown May 14, 1998

Variety	1999		2000	2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Joliette	2271	5570	8564	6891	6891	5909	7008	118
Bor72002	2679	4435	8504	6358	6358	5847	6432	109
Bor94301	2684	4925	7584	6612	6612	5627	6374	108
Climax	**2608**	**3998**	**7493**	**6291**	**6291**	**5464**	**5927**	**100**
MEAN	2560	4731	8036	6538	6538	5712	6435	
C.V. (%)	16	11	6	7	7		7	
LSD(0.05)	ns	839	725	ns	ns		737	

Table 2.4. 5 Canora Westerwolds Ryegrass 1999 and 2000

Westerwolds Ryegrass Variety Adaptation Test
Canora, SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/12/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
NSCL 30	8867	5630	-	5630	7249	101
Aubade	**8635**	**5683**	**-**	**5683**	**7159**	**100**
MEAN	8751	5657	-	5657	7204	
C.V. (%)	6	3	-	3	6	
LSD(0.05)	ns	ns	-	ns	ns	

Table 2.4. 4 Canora Timothy 1998

Timothy Variety Adaptation Test
Canora, SK.
Sown May 14, 1998

Variety	1999		2000	2001		3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/1999	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Joliette	2271	5570	8564	6891	6891	5909	7008	118
Bor72002	2679	4435	8504	6358	6358	5847	6432	109
Bor94301	2684	4925	7584	6612	6612	5627	6374	108
Climax	**2608**	**3998**	**7493**	**6291**	**6291**	**5464**	**5927**	**100**
MEAN	2560	4731	8036	6538	6538	5712	6435	
C.V. (%)	16	11	6	7	7		7	
LSD(0.05)	ns	839	725	ns	ns		737	

Table 2.4. 5 Canora Westerwolds Ryegrass 1999 and 2000

Westerwolds Ryegrass Variety Adaptation Test
Canora, SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/12/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
NSCL 30	8867	5630	-	5630	7249	101
Aubade	**8635**	**5683**	**-**	**5683**	**7159**	**100**
MEAN	8751	5657	-	5657	7204	
C.V. (%)	6	3	-	3	6	
LSD(0.05)	ns	ns	-	ns	ns	

Table 2.4. 6 Canora Alfalfa 1999

Alfalfa Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ZG 9831	9529	14324	7656	3563	11219	8592	12772	117
CW 6408	10262	14859	7472	2841	10313	8867	12586	115
SL 9902	9394	13796	7039	3408	10446	8216	12121	111
CW 4223	9424	13979	6089	2843	8932	7757	11456	105
R922	9037	13330	6432	3100	9532	7735	11431	105
SL 9901	9240	13718	6155	2858	9013	7698	11366	104
SL 9900	9054	13496	5889	3147	9035	7471	11265	103
Geneva	8978	13372	5895	3208	9102	7436	11237	103
DS 9929	9500	13830	5625	2568	8192	7562	11011	101
DS 9927	8968	13048	6472	2344	8816	7720	10932	100
Beaver	**9148**	**13001**	**6438**	**2397**	**8835**	**7793**	**10918**	**100**
R923	8739	13418	4843	2662	7504	6791	10461	96
DS 9923	8564	12792	5456	2423	7878	7010	10335	95
C227	9318	13298	5318	1942	7259	7318	10278	94
Anchor	8598	13223	4509	2794	7304	6554	10263	94
DS 9924	8176	12275	5131	2584	7715	6654	9995	92
C304	8743	13068	4405	2302	6707	6574	9887	91
DS 9925	8740	12384	4916	2358	7274	6828	9829	90
DS 9928	8251	12369	4795	2304	7099	6523	9734	89
2065 MF	8513	12558	4300	2210	6510	6407	9534	87
4241	7871	11758	4992	2159	7151	6431	9455	87
Gibralter	8510	12526	3710	1881	5591	6110	9058	83
3030	7916	11770	4130	2117	6247	6023	9009	83
Rambler	8192	10984	5607	1272	6879	6900	8931	82
MEAN	8851	13049	5553	2553	8106	7207	10578	
C.V. (%)	8	8	36	34	34		20	
LSD(0.05)	1003	1479	2821	1230	3944		1413	

Note: Yield data for 2001 has noise in the data due to a moisture gradient at each end of the plot area. The ANOVA table indicates that the means are not significant, but the LSD's given show that the means are different. Caution must be used when interpreting these results. When the data are combined over the two years the CV comes down, but the data are still not significantly diffterent, but the LSD still indicates that there are in fact some differences. The Error terms are in fact heterogenius and come from two separate populations and therefore should not be pooled.

Table 2.4. 6 Canora Alfalfa 1999

Alfalfa Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000 CUT#1 Forage Yield (kg DM/ha) July 12/2000	2000 Total Forage Yield (kg DM/ha)	2001 CUT#1 Forage Yield (kg DM/ha) July 3/2001	2001 CUT#2 Forage Yield (kg DM/ha) Aug 14/2001	2001 Total Forage Yield (kg DM/ha)	2 Year Average CUT#1 Forage Yield (kg DM/ha)	2 Year Average Total Forage Yield (kg DM/ha)	2 Year Average % of Beaver
ZG 9831	9529	14324	7656	3563	11219	8592	12772	117
CW 6408	10262	14859	7472	2841	10313	8867	12586	115
SL 9902	9394	13796	7039	3408	10446	8216	12121	111
CW 4223	9424	13979	6089	2843	8932	7757	11456	105
R922	9037	13330	6432	3100	9532	7735	11431	105
SL 9901	9240	13718	6155	2858	9013	7698	11366	104
SL 9900	9054	13496	5889	3147	9035	7471	11265	103
Geneva	8978	13372	5895	3208	9102	7436	11237	103
DS 9929	9500	13830	5625	2568	8192	7562	11011	101
DS 9927	8968	13048	6472	2344	8816	7720	10932	100
Beaver	**9148**	**13001**	**6438**	**2397**	**8835**	**7793**	**10918**	**100**
R923	8739	13418	4843	2662	7504	6791	10461	96
DS 9923	8564	12792	5456	2423	7878	7010	10335	95
C227	9318	13298	5318	1942	7259	7318	10278	94
Anchor	8598	13223	4509	2794	7304	6554	10263	94
DS 9924	8176	12275	5131	2584	7715	6654	9995	92
C304	8743	13068	4405	2302	6707	6574	9887	91
DS 9925	8740	12384	4916	2358	7274	6828	9829	90
DS 9928	8251	12369	4795	2304	7099	6523	9734	89
2065 MF	8513	12558	4300	2210	6510	6407	9534	87
4241	7871	11758	4992	2159	7151	6431	9455	87
Gibralter	8510	12526	3710	1881	5591	6110	9058	83
3030	7916	11770	4130	2117	6247	6023	9009	83
Rambler	8192	10984	5607	1272	6879	6900	8931	82
MEAN	8861	13049	5553	2553	8106	7207	10578	
C V. (%)	8	8	36	34	34		20	
LSD(0.05)	1003	1479	2821	1230	3944		1413	

Note: Yield data for 2001 has noise in the data due to a moisture gradient at each end of the plot area. The ANOVA table indicates that the means are not significant, but the LSD's given show that the means are different. Caution must be used when interpreting these results. When the data are combined over the two years the CV comes down, but the data are still not significantly diffterent, but the LSD still indicates that there are in fact some differences. The Error terms are in fact heterogenius and come from two separate populations and therefore should not be pooled.

Table 2.4. 7 Canora Clover 1999

Clover Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Vivi (RC)	9196	9945	13046	-	13046	11121	11496	107
Aurora	8509	9485	12345	-	12345	10427	10915	101
Altaswede	**8560**	**9300**	**12244**	-	**11860**	**10402**	**10772**	**100**
BOR 2222	7890	8471	10840	-	10840	9365	9656	90
NSCL 29	6902	7971	10821	-	10821	8862	9396	87
MEAN	8212	9034	11860	-	11860	10035	10447	
C.V. (%)	13	14	13	-	13		14	
LSD(0.05)	ns	ns	ns	-	ns		538	

Table 2.4. 8 Canora Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Troy
	July 12/2000	July 3/2001	-			
Troy	**8259**	**2801**	**-**	**2801**	**5530**	**100**
KVER003	6196	1340	-	1340	3768	68
MEAN	7227	2070	-	2070	4649	
C.V. (%)	15	9	-	9	17	
LSD(0.05)	ns	431	-	431	ns	

Table 2.4. 7 Canora Clover 1999

Clover Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
Vivi (RC)	9196	9945	13046	-	13046	11121	11496	107
Aurora	8509	9485	12345	-	12345	10427	10915	101
Altaswede	8560	9300	12244	-	11860	10402	10772	100
BOR 2222	7890	8471	10840	-	10840	9365	9656	90
NSCL 29	6902	7971	10821	-	10821	8862	9396	87
MEAN	8212	9034	11860	-	11860	10035	10447	
C.V. (%)	13	14	13	-	13		14	
LSD(0.05)	ns	ns	ns	-	ns		538	

Table 2.4. 8 Canora Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Troy
	July 12/2000	July 3/2001	-			
Troy	8259	2801	-	2801	5530	100
KVER003	6196	1340	-	1340	3768	68
MEAN	7227	2070	-	2070	4649	
C.V. (%)	15	9	-	9	17	
LSD(0.05)	ns	431	-	431	ns	

Table 2.4. 9 Canora Timothy 1999

Timothy Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Climax
GPTI8906	10017	3715	-	3715	6867	102
Climax	**10290**	**3679**	**-**	**3679**	**6739**	**100**
GPTI8905	9323	3538	-	3538	6674	99
MEAN	9876	3644	-	3644	6760	
C.V. (%)	5	5	-	5	9	
LSD(0.05)	779	ns	-	ns	ns	

Table 2.4. 10 Canora Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) 07/12/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	**9624**	-	**9624**	**100**
Douglas	7406	-	7406	77
Vavilov	7175	-	7175	75
MEAN	8068	-	8068	
C.V. (%)	5	-	5	
LSD(0.05)	749	-	749	

Table 2.4. 9 Canora Timothy 1999

Timothy Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Climax
GPTI8906	10017	3715	-	3715	6867	102
Climax	**10290**	**3679**	**-**	**3679**	**6739**	**100**
GPTI8905	9323	3538	-	3538	6674	99
MEAN	9876	3644	-	3644	6760	
C.V. (%)	5	5	-	5	9	
LSD(0.05)	779	ns	-	ns	ns	

Table 2.4. 10 Canora Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Canora, SK.
Established May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
	07/12/00	-		
Kirk	**9624**	**-**	**9624**	**100**
Douglas	7406	-	7406	77
Vavilov	7175	-	7175	75
MEAN	8068	-	8068	
C.V. (%)	5	-	5	
LSD(0.05)	749	-	749	

Table 2.4. 11 Canora Bromegrass 1999

Bromegrass Variety Adaptation Test
Canora, SK.
Sown May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
S-9356 I	11275	5406	-	5406	8340	108
Carlton	**11433**	**4080**	-	**4080**	**7757**	**100**
LOBF9201	11129	4383	-	4383	7756	100
LOBF9202	11188	3973	-	3973	7581	98
MB-A	9953	4448	-	4448	7201	93
Fleet	10554	3503	-	3503	7028	91
MEAN	10922	4299	-	4299	7610	
C.V. (%)	6	19	-	19	10	
LSD(0.05)	986	1251	-	1251	ns	

Table 2.4. 12 Canora Italian Ryegrass Forage Yield 1998, 1999 and 2000

Italian Ryegrass Trials
Sown 1998, 1999 and 2000
Canora, Sask.

Variety	1998	2000				2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 08/21/00	CUT#2 Forage Yield (kg DM/ha) 10/02/00	Total Forage Yield (kg DM/ha)	% of Maris Ledger	Total Forage Yield (kg DM/ha)	% of Maris Ledger
Agrition	-	6170	1305	7476	103		
Maris Ledger Italian	**2516**	**5995**	**1238**	**7233**	**100**	**4245**	**100**
Bar LMD 8603	-	5524	1385	6908	96		
LMT 95508	-	5225	1422	6647	92		
Barrextra Italian	2444	5292	1338	6630	92	3926	92
Bar LMD 9307	-	5200	1213	6413	89		
Lemtal Italian	2599	4936	1222	6158	85	3729	88
Bellem Italian	2378	4931	1154	6085	84	3637	86
Barzini Italian	2234	5093	905	5997	83	3557	**84**
Bartali Italian	2270	4548	1158	5707	79	3421	81
Barverdi Italian	2214	4266	1179	5445	75	3276	77
Meribel Italian	2460	4215	1148	5363	74	3297	78
Bartolini Italian	2096	4414	873	5287	73	3168	75
Barmultra Italian	1962	-	-	-			
Bartissimo Italian	2271	-	-	-			
Sabalan Italian	1948	-	-	-			
MEAN	2283	5062	1195	6258		3669	
C.V. (%)	26	9	16	9			
LSD(0.05)	ns	657	269	841			

Note:1999 annual ryegrass trials at Canora were flooded out.

Table 2.4. 11 Canora Bromegrass 1999

Bromegrass Variety Adaptation Test
Canora, SK.
Sown May 1999

Variety	2000	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) July 12/2000	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
S-9356 I	11275	5406	-	5406	8340	108
Carlton	**11433**	**4080**	**-**	**4080**	**7757**	**100**
LOBF9201	11129	4383	-	4383	7756	100
LOBF9202	11188	3973	-	3973	7581	98
MB-A	9953	4448	-	4448	7201	93
Fleet	10554	3503	-	3503	7028	91
MEAN	10922	4299	-	4299	7610	
C.V. (%)	6	19	-	19	10	
LSD(0.05)	986	1251	-	1251	ns	

Table 2.4. 12 Canora Italian Ryegrass Forage Yield 1998, 1999 and 2000

Italian Ryegrass Trials
Sown 1998, 1999 and 2000
Canora, Sask.

Variety	1998	2000				2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 08/21/00	CUT#2 Forage Yield (kg DM/ha) 10/02/00	Total Forage Yield (kg DM/ha)	% of Maris Ledger	Total Forage Yield (kg DM/ha)	% of Maris Ledger
Agrition	-	6170	1305	7476	103		
Maris Ledger Italian	**2516**	**5995**	**1238**	**7233**	**100**	**4245**	**100**
Bar LMD 8603	-	5524	1385	6908	96		
LMT 95508	-	5225	1422	6647	92		
Barrextra Italian	2444	5292	1338	6630	92	3926	92
Bar LMD 9307	-	5200	1213	6413	89		
Lemtal Italian	2599	4936	1222	6158	85	3729	88
Bellem Italian	2378	4931	1154	6085	84	3637	86
Barzini Italian	2234	5093	905	5997	83	3557	**84**
Bartali Italian	2270	4548	1158	5707	79	3421	81
Barverdi Italian	2214	4266	1179	5445	75	3276	77
Meribel Italian	2460	4215	1148	5363	74	3297	78
Bartolini Italian	2096	4414	873	5287	73	3168	75
Barmultra Italian	1962	-	-	-			
Bartissimo Italian	2271	-	-	-			
Sabalan Italian	1948	-	-	-			
MEAN	2283	5062	1195	6258		3669	
C.V. (%)	26	9	16	9			
LSD(0.05)	ns	657	269	841			

Note:1999 annual ryegrass trials at Canora were flooded out.

Table 2.4. 13 Canora Westerwolds Ryegrass Forage Yield 1998, 1999 and 2000

Westerwolds Ryegrass Trials
Sown in 1988, 1999 and 2000
Canora, Sask.

Variety	1998		1999		2000			2 Year Average			3Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 28/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 18/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 21/2000	CUT#2 Forage Yield (kg DM/ha) Oct. 2/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Agraco	Total Forage Yield (kg DM/ha)	% of Agraco
Barspectra	2325	4343	7602	8341	6580	1083	7663	7091	8002	105	6782	101
Magnum	1339	5013	6980	8750	6054	1091	7145	6517	7948	104	6969	104
Agri-Hilton	-	-	6296	7093	6953	1363	8316	6625	7705	101	-	-
Aubade	-	-	7008	8502	5734	1152	6886	6371	7694	101	-	-
Baroldi	1786	4253	6676	7660	6617	1034	7651	6646	7655	101	6521	97
Agraco	2449	4899	6646	7379	6405	1444	7849	6625	7614	100	6709	100
Bar LWD 8611	-	-	6677	7652	6251	1280	7531	6464	7592	100	-	-
Andrea	1611	4461	6076	7876	5982	1271	7253	6029	7564	99	6530	97
Barturbo	2063	4680	5635	6860	6318	1382	7699	5977	7280	96	6413	96
Sabroso	-	-	5835	6554	6388	1056	7444	6111	6999	92	-	-
Barwoltra	1825	4089	5768	6517	6350	1039	7389	6059	6953	91	5998	89
Barcimatra	2337	5079	6287	7418	5169	1137	6306	5728	6862	90	6268	93
SW WWR9016	2646	5327	5244	6203	5638	1044	6681	5441	6442	85	6070	90
Max	1136	3081	6167	6936	4571	1020	5591	5369	6263	82	5203	78
MEAN	1952	4522	6350	7410	6072	1171	7243	6211	7327		6346	
C.V. (%)			16	18	10	22	11		15			
LSD(0.05)			ns	ns	893	ns	1146		ns			

Note: The Westerwolds annual ryegrass at Canora failed to establish in 2001 due the severe draught in the area.

Table 2.4. 14 Canora Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000

1998 Wheat/Triticale Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 08/18/99	CUT#1 Forage Yield (kg DM/ha) 21/08/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/2000	Total Forage Yield (kg DM/ha)	% of CDC Teal
Frank triticale	6937	7926	7316	-	7316	7393	105
CDC Teal wheat	6181	6939	7981	-	7981	7034	100
Genesis wheat	7109	6257	7598	-	7598	6988	99
MEAN	6742	7040	7632	-	7632	7138	
C.V. (%)	4	10	8	-	8	8	
LSD(0.05)	500	1192	ns	-	ns	ns	

Table 2.4. 13 Canora Westerwolds Ryegrass Forage Yield 1998, 1999 and 2000

Westerwolds Ryegrass Trials
Sown in 1988, 1999 and 2000
Canora, Sask.

Variety	1998		1999		2000			2 Year Average			3Year Average	
	CUT#1 Forage Yield (kg DM/ha) July 28/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 18/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 21/2000	CUT#2 Forage Yield (kg DM/ha) Oct. 2/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Agraco	Total Forage Yield (kg DM/ha)	% of Agraco
Barspectra	2325	4343	7602	8341	6580	1083	7663	7091	8002	105	6782	101
Magnum	1339	5013	6980	8750	6054	1091	7145	6517	7948	104	6969	104
Agri-Hilton	-	-	6296	7093	6953	1363	8316	6625	7705	101	-	-
Aubade	-	-	7008	8502	5734	1152	6886	6371	7694	101	-	-
Baroldi	1786	4253	6676	7660	6617	1034	7651	6646	7655	101	6521	97
Agraco	**2449**	**4899**	**6646**	**7379**	**6405**	**1444**	**7849**	**6525**	**7614**	**100**	**6709**	**100**
Bar LWD 8611	-	-	6677	7652	6251	1280	7531	6464	7592	100	-	-
Andrea	1611	4461	6076	7876	5982	1271	7253	6029	7564	99	6530	97
Barturbo	2063	4680	5635	6860	6318	1382	7699	5977	7280	96	6413	96
Sabroso	-	-	5835	6554	6388	1056	7444	6111	6999	92	-	-
Barwoltra	1825	4089	5768	6517	6350	1039	7389	6059	6953	91	5998	89
Barcimatra	2337	5079	6287	7418	5169	1137	6306	5728	6862	90	6268	93
SW WWR9016	2646	5327	5244	6203	5638	1044	6681	5441	6442	85	6070	90
Max	1136	3081	6167	6936	4571	1020	5591	5369	6263	82	5203	78
MEAN	1952	4522	6350	7410	6072	1171	7243	6211	7327		6346	
C.V. (%)			16	18	10	22	11		15			
LSD(0.05)			ns	ns	893	ns	1146		ns			

Note: The Westerwolds annual ryegrass at Canora failed to establish in 2001 due the severe draught in the area.

Table 2.4. 14 Canora Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000

1998 Wheat/Triticale Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 08/18/99	CUT#1 Forage Yield (kg DM/ha) 21/08/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/2000	Total Forage Yield (kg DM/ha)	% of CDC Teal
Frank triticale	6937	7926	7316	-	7316	7393	105
CDC Teal wheat	6181	6939	7981	-	7981	7034	100
Genesis wheat	7109	6257	7598	-	7598	6988	99
MEAN	6742	7040	7632	-	7632	7138	
C.V. (%)	4	10	8	-	8	8	
LSD(0.05)	500	1192	ns	-	ns	ns	

Table 2.4. 15 Canora Wheat/Triticale Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					**1999**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	9	52	36	61	Frank	8	50	32	62
Genesis	9	54	37	60	Genesis	8	48	32	62
CDC Teal	**8**	**57**	**41**	**58**	**CDC Teal**	**7**	**53**	**36**	**60**
MEAN	8	54	38	60	MEAN	8	50	33	62
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	10	54	36	60	Frank	9	52	35	61
Genesis	9	57	39	59	Genesis	8	53	36	61
CDC Teal	**9**	**59**	**41**	**58**	**CDC Teal**	**8**	**56**	**39**	**59**
MEAN	9	57	39	59	MEAN	8	54	37	60
C.V. (%)					C.V. (%)	6	3	2	1
LSD(0.05)					LSD(0.05)	ns	3	2	ns

Note: The quality samples collected on each variety were bulked with in location and year.

Table 2.4. 16 Canora Oat Green-feed Forage Yield 1998, 1999 and 2000

OatTrials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 18/08/99	CUT#1 Forage Yield (kg DM/ha) 21/08/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/00	Total Forage Yield (kg DM/ha)	% of CDC Bell
CDC Pacer	8448	9937	9649	-	9649	9345	101
CDC Bell	**6865**	**9998**	**10825**	**-**	**10825**	**9229**	**100**
S093806 (CDC Bale	7709	9235	10734	-	10734	9226	100
AC Mustang	7461	8201	9771	-	9771	8477	92
MEAN	7621	9343	10245	-	10245	9069	
C.V. (%)	6	12	9	-	9	10	
LSD(0.05)	740	ns	ns	-	ns	ns	

Table 2.4. 15 Canora Wheat/Triticale Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	9	52	36	61	Frank	8	50	32	62
Genesis	9	54	37	60	Genesis	8	48	32	62
CDC Teal	8	57	41	58	CDC Teal	7	53	36	60
MEAN	8	54	38	60	MEAN	8	50	33	62
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	10	54	36	60	Frank	9	52	35	61
Genesis	9	57	39	59	Genesis	8	53	36	61
CDC Teal	9	59	41	58	CDC Teal	8	56	39	59
MEAN	9	57	39	59	MEAN	8	54	37	60
C.V. (%)					C.V. (%)	6	3	2	1
LSD(0.05)					LSD(0.05)	ns	3	2	ns

Note: The quality samples collected on each variety were bulked with in location and year.

Table 2.4. 16 Canora Oat Green-feed Forage Yield 1998, 1999 and 2000

OatTrials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 18/08/99	CUT#1 Forage Yield (kg DM/ha) 21/08/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/00	Total Forage Yield (kg DM/ha)	% of CDC Bell
CDC Pacer	8448	9937	9649	-	9649	9345	101
CDC Bell	**6865**	**9998**	**10825**	-	**10825**	**9229**	**100**
S093806 (CDC Bale	7709	9235	10734	-	10734	9226	100
AC Mustang	7461	8201	9771	-	9771	8477	92
MEAN	7621	9343	10245	-	10245	9069	
C.V. (%)	6	12	9	-	9	10	
LSD(0.05)	740	ns	ns	-	ns	ns	

Table 2.4. 17 Canora Oat Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Oat Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	8	58	36	60	AC Mustang	9	58	34	61
CDC Bell	**8**	**56**	**38**	**60**	**CDC Bell**	**7**	**52**	**33**	**62**
CDC Pacer	7	58	39	59	CDC Pacer	7	57	35	61
S093806	8	58	39	59	S093806	6	57	36	60
MEAN	8	58	38	60	MEAN	8	56	34	61
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				

2000					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	9	57	38	59	AC Mustang	9	58	36	60
CDC Bell	**9**	**55**	**38**	**60**	**CDC Bell**	**8**	**55**	**36**	**60**
CDC Pacer	7	55	37	60	CDC Pacer	7	57	37	60
S093806	8	55	37	60	S093806	7	56	37	60
MEAN	8	55	38	60	MEAN	8	56	37	60
C.V. (%)					C.V. (%)	9	2	3	1
LSD(0.05)					LSD(0.05)	ns	2	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.

S093806 is now registered as CDC Baler

Table 2.4. 18 Canora Barley Green-feed Forage Yield 1998, 1999 and 2000

Barley Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 18/08/99	CUT#1 Forage Yield (kg DM/ha) 21/08/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/00	Total Forage Yield (kg DM/ha)	% of Virden
AC Rosser	7547	12955	10906	-	10906	10469	101
Virden	**7479**	**13757**	**9922**	-	**9922**	**10386**	**100**
AC Lacombe	7690	14159	8529	-	8529	10126	97
CDC Earl	7240	12781	10301	-	10301	10107	97
CDC Dolly	7212	11343	10072	-	10072	9543	92
Bonanza	6617	13148	8551	-	8551	9438	91
Manley	7815	10095	10307	-	10307	9406	91
Seebe	7369	11348	9181	-	9181	9299	90
MEAN	7371	12448	9721	-	9721	9847	
C.V. (%)	8	18	7	-	7	14	
LSD(0.05)	ns	ns	1058	-	1058	ns	

Table 2.4. 17 Canora Oat Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Oat Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	8	58	36	60	AC Mustang	9	58	34	61
CDC Bell	**8**	**56**	**38**	**60**	**CDC Bell**	**7**	**52**	**33**	**62**
CDC Pacer	7	58	39	59	CDC Pacer	7	57	35	61
S093806	8	58	39	59	S093806	6	57	36	60
MEAN	8	58	38	60	MEAN	8	56	34	61
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	9	57	38	59	AC Mustang	9	58	36	60
CDC Bell	**9**	**55**	**38**	**60**	**CDC Bell**	**8**	**55**	**36**	**60**
CDC Pacer	7	55	37	60	CDC Pacer	7	57	37	60
S093806	8	55	37	60	S093806	7	56	37	60
MEAN	8	55	38	60	MEAN	8	56	37	60
C.V. (%)					C.V. (%)	9	2	3	1
LSD(0.05)					LSD(0.05)	ns	2	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.
S093806 is now registered as CDC Baler

Table 2.4. 18 Canora Barley Green-feed Forage Yield 1998, 1999 and 2000

Barley Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 18/08/99	CUT#1 Forage Yield (kg DM/ha) 21/08/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 21/08/00	Total Forage Yield (kg DM/ha)	% of Virden
AC Rosser	7547	12955	10906	-	10906	10469	101
Virden	**7479**	**13757**	**9922**	**-**	**9922**	**10386**	**100**
AC Lacombe	7690	14159	8529	-	8529	10126	97
CDC Earl	7240	12781	10301	-	10301	10107	97
CDC Dolly	7212	11343	10072	-	10072	9543	92
Bonanza	6617	13148	8551	-	8551	9438	91
Manley	7815	10095	10307	-	10307	9406	91
Seebe	7369	11348	9181	-	9181	9299	90
MEAN	7371	12448	9721	-	9721	9847	
C.V. (%)	8	18	7	-	7	14	
LSD(0.05)	ns	ns	1058	-	1058	ns	

Table 2.4. 19 Canora Barley Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Barley Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	8	58	37	60	Bonanza	5	54	38	59
AC Lacombe	7	57	37	60	AC Lacombe	5	60	30	63
AC Rosser	7	57	34	61	AC Rosser	7	55	38	60
CDC Earl	9	58	36	60	CDC Earl	6	55	36	61
Virden	**7**	**58**	**38**	**60**	**Virden**	**5**	**55**	**37**	**60**
Manley	7	56	36	60	Manley	6	55	37	60
CDC Dolly	7	55	34	61	CDC Dolly	6	55	36	61
Seebe	8	57	36	60	Seebe	7	53	34	61
MEAN	7	57	36	60	MEAN	6	55	36	61
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				

2000					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	7	64	46	56	Bonanza	6	59	41	58
AC Lacombe	9	61	41	58	AC Lacombe	7	60	36	60
AC Rosser	8	58	39	59	AC Rosser	7	57	37	60
CDC Earl	10	57	38	60	CDC Earl	8	57	37	60
Virden	**8**	**62**	**41**	**58**	**Virden**	**7**	**58**	**39**	**59**
Manley	8	57	38	60	Manley	7	56	37	60
CDC Dolly	6	57	37	60	CDC Dolly	6	56	36	61
Seebe	9	59	38	59	Seebe	8	56	36	60
MEAN	8	59	40	59	MEAN	7	57	37	60
C.V. (%)					C.V. (%)	10	3	6	2
LSD(0.05)					LSD(0.05)	1	ns	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.

Table 2.4. 20 Canora Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000

Summary of 1998, 1999 and 2000 Cereal Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Virden
	07/28/98	08/18/99	08/21/00	-			
AC Rosser (barley)	7547	12955	10906	-	10906	10469	101
Virden (barley)	**7479**	**13757**	**9922**	**-**	**9922**	**10386**	**100**
AC Lacombe(barley)	7690	14159	8529	-	8529	10126	97
CDC Earl (barley)	7240	12781	10301	-	10301	10107	97
CDC Bell (oat)	8448	9998	10825	-	10825	9757	94
CDC Dolly (barley)	7212	11343	10072	-	10072	9542	92
Bonanza (barley)	6617	13148	8551	-	8551	9439	91
Manley (barley)	7815	10095	10307	-	10307	9406	91
Seebe (barley)	7369	11348	9181	-	9181	9299	90
S093806 (oat)	7709	9235	10734	-	10734	9226	89
CDC Pacer (oat)	6865	9937	9649	-	9649	8817	85
AC Mustang (oat)	7461	8201	9771	-	9771	8478	82
Frank (T)	6937	7926	7316	-	7316	7393	71
CDC Teal (HRW)	6181	6939	7981	-	7981	7034	68
Genesis (SRW)	7109	6257	7598	-	7598	6988	67
MEAN	7312	10539	9443	-	9443	9098	
C.V. (%)				-			
LSD(0.05)				-			

Table 2.4. 19 Canora Barley Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Barley Trials
Test of Forage Green Feed Quality
Canora, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	8	58	37	60	Bonanza	5	54	38	59
AC Lacombe	7	57	37	60	AC Lacombe	5	60	30	63
AC Rosser	7	57	34	61	AC Rosser	7	55	38	60
CDC Earl	9	58	36	60	CDC Earl	6	55	36	61
Virden	**7**	**58**	**38**	**60**	**Virden**	**5**	**55**	**37**	**60**
Manley	7	56	36	60	Manley	6	55	37	60
CDC Dolly	7	55	34	61	CDC Dolly	6	55	36	61
Seebe	8	57	36	60	Seebe	7	53	34	61
MEAN	7	57	36	60	MEAN	6	55	36	61
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				

2000					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	7	64	46	56	Bonanza	6	59	41	58
AC Lacombe	9	61	41	58	AC Lacombe	7	60	36	60
AC Rosser	8	58	39	59	AC Rosser	7	57	37	60
CDC Earl	10	57	38	60	CDC Earl	8	57	37	60
Virden	**8**	**62**	**41**	**58**	**Virden**	**7**	**58**	**39**	**59**
Manley	8	57	38	60	Manley	7	56	37	60
CDC Dolly	6	57	37	60	CDC Dolly	6	56	36	61
Seebe	9	59	38	59	Seebe	8	56	36	60
MEAN	8	59	40	59	MEAN	7	57	37	60
C.V. (%)					C.V. (%)	10	3	6	2
LSD(0.05)					LSD(0.05)	1	ns	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.

Table 2.4. 20 Canora Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000

Summary of 1998, 1999 and 2000 Cereal Trials
Test of Forage Green Feed Yields
Canora, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/28/98	Total Forage Yield (kg DM/ha) 08/18/99	CUT#1 Forage Yield (kg DM/ha) 08/21/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Virden
AC Rosser (barley)	7547	12955	10906	-	10906	10469	101
Virden (barley)	**7479**	**13757**	**9922**	**-**	**9922**	**10386**	**100**
AC Lacombe(barley)	7690	14159	8529	-	8529	10126	97
CDC Earl (barley)	7240	12781	10301	-	10301	10107	97
CDC Bell (oat)	8448	9998	10825	-	10825	9757	94
CDC Dolly (barley)	7212	11343	10072	-	10072	9542	92
Bonanza (barley)	6617	13148	8551	-	8551	9439	91
Manley (barley)	7815	10095	10307	-	10307	9406	91
Seebe (barley)	7369	11348	9181	-	9181	9299	90
S093806 (oat)	7709	9235	10734	-	10734	9226	89
CDC Pacer (oat)	6865	9937	9649	-	9649	8817	85
AC Mustang (oat)	7461	8201	9771	-	9771	8478	82
Frank (T)	6937	7926	7316	-	7316	7393	71
CDC Teal (HRW)	6181	6939	7981	-	7981	7034	68
Genesis (SRW)	7109	6257	7598	-	7598	6988	67
MEAN	7312	10539	9443	-	9443	9098	
C.V. (%)				-			
LSD(0.05)				-			

Table 2.4. 21 Canora Alfalfa 2000

Alfalfa Variety Adaptation Test
Canora, SK.
Established May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 14/2001	Total Forage Yield (kg DM/ha)	% of Beaver
CW 73038	7817	3511	11328	123
DS028-BY	8141	3134	11274	123
DK 134	7790	3231	11021	120
DS029-BY	7700	3244	10944	119
"9603	7851	3082	10933	119
DS030-BY	7413	3434	10848	118
Rambler	7734	3075	10809	118
DK 124	7256	3312	10567	115
DS380-BY	7317	3206	10522	115
DS2000	7912	2439	10350	113
Rangelander	7296	2920	10216	111
DS027-BY	7208	2884	10092	110
EX101	7056	2654	9711	106
54V54	6911	2778	9688	106
"3008	6389	3218	9607	105
AC Blue J	6992	2539	9531	104
Beaver	**7203**	**1971**	**9175**	**100**
MEAN	7411	2978	10389	
C.V. (%)	14	27	16	
LSD(0.05)	1443	1130	ns	

Table 2.4. 22 Canora Timothy 2000

Timothy Variety Adaptation Test
Canora, SK.
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Climax
MOTIM	5159	-	5159	111
PCQX-39	4969	-	4969	107
CLIMAX	**4636**	-	**4636**	**100**
BOR 94374	4579	-	4579	99
BOR 94372	4529	-	4529	98
PBQX-1	4104	-	4104	89
MEAN	4663	-	4663	
C.V. (%)	12	-	12	
LSD(0.05)	820	-	820	

Table 2.4. 21 Canora Alfalfa 2000

Alfalfa Variety Adaptation Test
Canora, SK.
Established May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 14/2001	Total Forage Yield (kg DM/ha)	% of Beaver
CW 73038	7817	3511	11328	123
DS028-BY	8141	3134	11274	123
DK 134	7790	3231	11021	120
DS029-BY	7700	3244	10944	119
"9603	7851	3082	10933	119
DS030-BY	7413	3434	10848	118
Rambler	7734	3075	10809	118
DK 124	7256	3312	10567	115
DS380-BY	7317	3206	10522	115
DS2000	7912	2439	10350	113
Rangelander	7296	2920	10216	111
DS027-BY	7208	2884	10092	110
EX101	7056	2654	9711	106
54V54	6911	2778	9688	106
"3008	6389	3218	9607	105
AC Blue J	6992	2539	9531	104
Beaver	**7203**	**1971**	**9175**	**100**
MEAN	7411	2978	10389	
C.V. (%)	14	27	16	
LSD(0.05)	1443	1130	ns	

Table 2.4. 22 Canora Timothy 2000

Timothy Variety Adaptation Test
Canora, SK.
Sown May 2000

Variety	2001			
	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	% of Climax
MOTIM	5159	-	5159	111
PCQX-39	4969	-	4969	107
CLIMAX	**4636**	-	**4636**	**100**
BOR 94374	4579	-	4579	99
BOR 94372	4529	-	4529	98
PBQX-1	4104	-	4104	89
MEAN	4663	-	4663	
C.V. (%)	12	-	12	
LSD(0.05)	820	-	820	

2.5 Melfort

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
1998	Barley	1998-2000	2.5.1
1998	Barley Quality	1998-2000	2.5.2
1998	Oat	1998-2000	2.5.3
1998	Oat Quality	1998-2000	2.5.4
1998	Wheat/Triticale	1998-2000	2.5.5
1998	Wheat/Triticale Quality	1998-2000	2.5.6
1998	Summary of Cereals	1998-2000	2.5.7
1998	Westerwolds Ryegrass	1998-2000	2.5.8
1998	Italian Ryegrass	1998-2000	2.5.9

Each year new forage variety trials are established at this site. When looking at the data in the tables established after 1998, please use caution in the interpretation of the results. Three years of data are required before there is sufficient confidence in the results.

Air temperatures and rainfall were very similar to that obtained at Tisdale in 2001 which was less than 50% of the 30 year normal (table A.1). The 2001, was likely the driest year experienced by this area in the past 30 years. Perennial Forage production from this area was as bad or worse than that in the Netherhill area. Annual ryegrass was sown in the spring of 2001 and forage production of these plots was not sufficient to warrant harvesting until October of 2001. At that time, only the westerwolds annual ryegrass had grown sufficiently enough that harvesting could proceed. Head development did not occur in 2001 and seed production was not an issue.

Virden barley was one of the higher yielding forage barley varieties at Canora, but tended to be one of the lowest yielding forage varieties at the Melfort location (table 2.5 1). CDC Dolly, Bonanza and AC Rosser yielded 120, 117 and 116% of Virden when the data are averaged over three years. The forage quality was similar between the forage varieties tested (table 2.5 2).

AC Mustang and CDC Pacer yielded 109 and 105% of CDC Bell at this location (table 2.5 3). Forage quality was similar between varieties (table 2.5 4).

CDC Teal tended to yield 10 and 13% more than Genesis and Frank, respectively (table 2.5 5). Forage quality was similar between the varieties tested (table 2.5 6).

Overall, CDC Teal, AC Mustang and CDC Pacer yielded 133, 129 and 125% of Virden when the data were averaged over three years (table 2.5 7).

Aubade, SWWWR9016 and Barwoltra Westerwolds annual ryegrass yielded 130%, 115 and 107% of Agraco, respectively (table 2.5 8). Barrextra Italian ryegrass yielded 110% of Maris Ledger (table 2.5 9).

Table 2.5. 1 Melfort Barley Green-feed Forage Yield 1998, 1999 and 2000

Barley Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Averge	
	Total Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha) Aug. 23/1999	CUT#1 Forage Yield (kg DM/ha) Aug. 22/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) -	% of Virden
CDC Dolly	12021	12076	9959	-	9959	11352	120
Bonanza	11252	13864	7937	-	7937	11018	117
AC Rosser	9869	13379	9741	-	9741	10996	116
AC Lacombe	9331	12411	10695	-	10695	10812	114
CDC Earl	10294	12897	8831	-	8831	10674	113
Manley	9259	12326	8194	-	8194	9926	105
Virden	**8297**	**12168**	**7893**	-	**7893**	**9453**	**100**
Seebe	8097	10443	8766	-	8766	9102	96
MEAN	9769	12445	9002	-	9002	10405	
C.V. (%)	17	20	17	-	17		
LSD(0.05)	2400	ns	ns	-	ns		

Table 2.5. 2 Melfort Barley Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Barley Trials
Test of Forage Green Feed Quality
Melfort, Sask.

1998				
Variety	CP	NDF	ADF	TDN
Bonanza	13	49	31	63
AC Lacombe	12	49	33	62
AC Rosser	13	50	34	61
CDC Earl	13	50	33	62
Virden	**13**	**49**	**33**	**62**
Manley	12	47	32	62
CDC Dolly	13	50	34	61
Seebe	13	51	35	61
MEAN	13	49	33	62
C.V. (%)				
LSD(0.05)				

1999				
Variety	CP	NDF	ADF	TDN
Bonanza	12	57	39	59
AC Lacombe	13	53	35	61
AC Rosser	13	54	36	61
CDC Earl	14	61	41	58
Virden	**12**	**55**	**38**	**59**
Manley	11	62	44	57
CDC Dolly	12	58	40	59
Seebe	12	61	42	58
MEAN	12	58	39	59
C.V. (%)				
LSD(0.05)				

2000				
Variety	CP	NDF	ADF	TDN
Bonanza	11	62	41	58
AC Lacombe	10	58	36	60
AC Rosser	10	59	37	60
CDC Earl	13	57	37	60
Virden	**12**	**60**	**40**	**58**
Manley	11	59	37	60
CDC Dolly	12	57	36	61
Seebe	12	57	37	60
MEAN	11	59	38	60
C.V. (%)				
LSD(0.05)				

Over All Years				
Variety	CP	NDF	ADF	TDN
Bonanza	12	56	37	60
AC Lacombe	12	53	35	61
AC Rosser	12	54	36	61
CDC Earl	13	56	37	60
Virden	**12**	**55**	**37**	**60**
Manley	11	56	38	60
CDC Dolly	12	55	36	60
Seebe	12	56	38	59
MEAN	12	55	37	60
C.V. (%)	6	5	6	2
LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.5. 1 Melfort Barley Green-feed Forage Yield 1998, 1999 and 2000

Barley Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Averge	
	Total Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha) Aug. 23/1999	CUT#1 Forage Yield (kg DM/ha) Aug. 22/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha) -	% of Virden
CDC Dolly	12021	12076	9959	-	9959	11352	120
Bonanza	11252	13864	7937	-	7937	11018	117
AC Rosser	9869	13379	9741	-	9741	10996	116
AC Lacombe	9331	12411	10695	-	10695	10812	114
CDC Earl	10294	12897	8831	-	8831	10674	113
Manley	9259	12326	8194	-	8194	9926	105
Virden	**8297**	**12168**	**7893**	**-**	**7893**	**9453**	**100**
Seebe	8097	10443	8766	-	8766	9102	96
MEAN	9769	12445	9002	-	9002	10405	
C.V. (%)	17	20	17	-	17		
LSD(0.05)	2400	ns	ns	-	ns		

Table 2.5. 2 Melfort Barley Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Barley Trials
Test of Forage Green Feed Quality
Melfort, Sask.

	1998			
Variety	CP	NDF	ADF	TDN
Bonanza	13	49	31	63
AC Lacombe	12	49	33	62
AC Rosser	13	50	34	61
CDC Earl	13	50	33	62
Virden	**13**	**49**	**33**	**62**
Manley	12	47	32	62
CDC Dolly	13	50	34	61
Seebe	13	51	35	61
MEAN	13	49	33	62
C.V. (%)				
LSD(0.05)				

	1999			
Variety	CP	NDF	ADF	TDN
Bonanza	12	57	39	59
AC Lacombe	13	53	35	61
AC Rosser	13	54	36	61
CDC Earl	14	61	41	58
Virden	**12**	**55**	**38**	**59**
Manley	11	62	44	57
CDC Dolly	12	58	40	59
Seebe	12	61	42	58
MEAN	12	58	39	59
C.V. (%)				
LSD(0.05)				

	2000			
Variety	CP	NDF	ADF	TDN
Bonanza	11	62	41	58
AC Lacombe	10	58	36	60
AC Rosser	10	59	37	60
CDC Earl	13	57	37	60
Virden	**12**	**60**	**40**	**58**
Manley	11	59	37	60
CDC Dolly	12	57	36	61
Seebe	12	57	37	60
MEAN	11	59	38	60
C.V. (%)				
LSD(0.05)				

	Over All Years			
Variety	CP	NDF	ADF	TDN
Bonanza	12	56	37	60
AC Lacombe	12	53	35	61
AC Rosser	12	54	36	61
CDC Earl	13	56	37	60
Virden	**12**	**55**	**37**	**60**
Manley	11	56	38	60
CDC Dolly	12	55	36	60
Seebe	12	56	38	59
MEAN	12	55	37	60
C.V. (%)	6	5	6	2
LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.5. 3 Melfort Oat Green-feed Forage Yield 1998, 1999 and 2000

OatTrials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of CDC Bell
	July 30/1998	Aug. 23/1999	Aug. 22/2000	-	-	-	
AC Mustang	9980	14341	12135	-	12135	12152	109
CDC Pacer	8744	15461	11218	-	11218	11808	105
CDC Bell	**8269**	**14312**	**10998**	**-**	**10998**	**11193**	**100**
S093806 (CDC Baler)	8447	14659	8860	-	8860	10655	95
MEAN	8860	14693	10803	-	10803	11452	
C.V. (%)	20	14	10	-	10	15	
LSD(0.05)	ns	ns	1687	-	1687	ns	

Table 2.5. 3 Melfort Oat Green-feed Forage Yield 1998, 1999 and 2000

OatTrials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha) Aug. 23/1999	CUT#1 Forage Yield (kg DM/ha) Aug. 22/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) -	% of CDC Bell
AC Mustang	9980	14341	12135	-	12135	12152	109
CDC Pacer	8744	15461	11218	-	11218	11808	105
CDC Bell	**8269**	**14312**	**10998**	-	**10998**	**11193**	**100**
S093806 (CDC Baler)	8447	14659	8860	-	8860	10655	95
MEAN	8860	14693	10803	-	10803	11452	
C.V. (%)	20	14	10	-	10	15	
LSD(0.05)	ns	ns	1687	-	1687	ns	

Table 2.5. 4 Melfort Oat Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Oat Trials
Test of Forage Green Feed Quality
Melfort, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	12	54	37	60	AC Mustang	11	57	40	59
CDC Bell	**13**	**54**	**37**	**60**	**CDC Bell**	**11**	**60**	**41**	**58**
CDC Pacer	13	52	35	61	CDC Pacer	12	61	42	58
S093806	11	50	36	60	S093806	12	60	42	58
MEAN	12	52	36	60	MEAN	11	59	41	58
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	58	37	60	AC Mustang	11	56	38	60
CDC Bell	**11**	**54**	**37**	**60**	**CDC Bell**	**11**	**56**	**38**	**60**
CDC Pacer	11	54	36	60	CDC Pacer	12	55	38	60
S093806	11	55	36	60	S093806	11	55	38	60
MEAN	11	55	36	60	MEAN	11	56	38	60
C.V. (%)					C.V. (%)	7	4	3	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.
S093806 is now registered as CDC Baler

Table 2.5. 5 Melfort Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000

Wheat/Triticale Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha) 07/30/98	CUT#1 Forage Yield (kg DM/ha) 08/23/99	CUT#1 Forage Yield (kg DM/ha) 08/22/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of CDC Teal
CDC Teal	**10213**	**15034**	**12342**	**-**	**12342**	**12530**	**100**
Genesis	8752	13592	11333	-	11333	11226	90
Frank	8657	14409	8090	-	8090	10385	83
MEAN	9208	14345.2	10588	-	10588	11380	
C.V. (%)	11	9.04327	8	-	8	9	
LSD(0.05)	ns	ns	1409	-	1409	ns	

Table 2.5. 4 Melfort Oat Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Oat Trials
Test of Forage Green Feed Quality
Melfort, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	12	54	37	60	AC Mustang	11	57	40	59
CDC Bell	**13**	**54**	**37**	**60**	**CDC Bell**	**11**	**60**	**41**	**58**
CDC Pacer	13	52	35	61	CDC Pacer	12	61	42	58
S093806	11	50	36	60	S093806	12	60	42	58
MEAN	12	52	36	60	MEAN	11	59	41	58
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	58	37	60	AC Mustang	11	56	38	60
CDC Bell	**11**	**54**	**37**	**60**	**CDC Bell**	**11**	**56**	**38**	**60**
CDC Pacer	11	54	36	60	CDC Pacer	12	55	38	60
S093806	11	55	36	60	S093806	11	55	38	60
MEAN	11	55	36	60	MEAN	11	56	38	60
C.V. (%)					C.V. (%)	7	4	3	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.
S093806 is now registered as CDC Baler

Table 2.5. 5 Melfort Wheat/Triticale Green-feed Forage Yield 1998, 1999 and 2000

Wheat/Triticale Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of CDC Teal
	07/30/98	08/23/99	08/22/00	-			
CDC Teal	**10213**	**15034**	**12342**	**-**	**12342**	**12530**	**100**
Genesis	8752	13592	11333	-	11333	11226	90
Frank	8657	14409	8090	-	8090	10385	83
MEAN	9208	14345.2	10588	-	10588	11380	
C.V. (%)	11	9.04327	8	-	8	9	
LSD(0.05)	ns	ns	1409	-	1409	ns	

Table 2.5. 6 Melfort Wheat/Triticale Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Melfort, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	13	49	33	62	Frank	12	57	40	59
Genesis	13	51	35	61	Genesis	13	56	39	59
CDC Teal	**13**	**50**	**34**	**61**	**CDC Teal**	**12**	**56**	**39**	**59**
MEAN	13	50	34	61	MEAN	12	56	39	59
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	11	52	35	61	Frank	12	53	36	61
Genesis	12	58	37	60	Genesis	13	55	37	60
CDC Teal	**12**	**55**	**36**	**60**	**CDC Teal**	**13**	**55**	**39**	**59**
MEAN	12	55	36	60	MEAN	12	54	37	60
C.V. (%)					C.V. (%)	3	4	6	2
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.5. 7 Melfort Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000

Summary of the 1998, 1999 and 2000 Cereal Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Averge	
	Total Forage Yield (kg DM/ha) 07/30/98	Total Forage Yield (kg DM/ha) 08/23/99	CUT#1 Forage Yield (kg DM/ha) 08/22/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 08/22/00	Total Forage Yield (kg DM/ha) -	% of Virden
CDC Teal (HRW)	10213	15034	12342		12342	12530	133
AC Mustang (oat)	9980	14341	12135		12135	12152	129
CDC Pacer (oat)	8744	15461	11218		11218	11808	125
CDC Dolly (barley)	12021	12076	9959		9959	11352	120
Genesis (SR)	8752	13592	11333		11333	11226	119
CDC Bell (oat)	8269	14312	10998		10998	11193	118
Bonanza (barley)	11252	13864	7937		7937	11018	117
AC Rosser (barley)	9869	13379	9741		9741	10996	116
AC Lacombe (barley)	9331	12411	10695		10695	10812	114
CDC Earl (barley)	10294	12897	8831		8831	10674	113
S093806 (oat)	8447	14659	8860		8860	10655	113
Frank (T)	8657	14409	8090		8090	10385	110
Manley (barley)	9259	12326	8194		8194	9926	105
Virden (barley)	**8297**	**12168**	**7893**		**7893**	**9453**	**100**
Seebe (barley)	8097	10443	8766		8766	9102	96
MEAN	9432	13425	9799		9799	10885	

Table 2.5. 6 Melfort Wheat/Triticale Forage Quality 1998, 1999 and 2000

1998, 1999 and 2000 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Melfort, Sask.

1998					1999				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	13	49	33	62	Frank	12	57	40	59
Genesis	13	51	35	61	Genesis	13	56	39	59
CDC Teal	**13**	**50**	**34**	**61**	**CDC Teal**	**12**	**56**	**39**	**59**
MEAN	13	50	34	61	MEAN	12	56	39	59
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2000					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	11	52	35	61	Frank	12	53	36	61
Genesis	12	58	37	60	Genesis	13	55	37	60
CDC Teal	**12**	**55**	**36**	**60**	**CDC Teal**	**13**	**55**	**39**	**59**
MEAN	12	55	36	60	MEAN	12	54	37	60
C.V. (%)					C.V. (%)	3	4	6	2
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.5. 7 Melfort Cereal Green-feed Forage Yield Summary 1998, 1999 and 2000

Summary of the 1998, 1999 and 2000 Cereal Trials
Test of Forage Green Feed Yields
Melfort, Sask.

Variety	1998	1999	2000			3 Year Averge	
	Total Forage Yield (kg DM/ha) 07/30/98	Total Forage Yield (kg DM/ha) 08/23/99	CUT#1 Forage Yield (kg DM/ha) 08/22/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha) 08/22/00	Total Forage Yield (kg DM/ha) -	% of Virden
CDC Teal (HRW)	10213	15034	12342		12342	12530	133
AC Mustang (oat)	9980	14341	12135		12135	12152	129
CDC Pacer (oat)	8744	15461	11218		11218	11808	125
CDC Dolly (barley)	12021	12076	9959		9959	11352	120
Genesis (SR)	8752	13592	11333		11333	11226	119
CDC Bell (oat)	8269	14312	10998		10998	11193	118
Bonanza (barley)	11252	13864	7937		7937	11018	117
AC Rosser (barley)	9869	13379	9741		9741	10996	116
AC Lacombe (barley)	9331	12411	10695		10695	10812	114
CDC Earl (barley)	10294	12897	8831		8831	10674	113
S093806 (oat)	8447	14659	8860		8860	10655	113
Frank (T)	8657	14409	8090		8090	10385	110
Manley (barley)	9259	12326	8194		8194	9926	105
Virden (barley)	**8297**	**12168**	**7893**		**7893**	**9453**	**100**
Seebe (barley)	8097	10443	8766		8766	9102	96
MEAN	9432	13425	9799		9799	10885	

Table 2.5. 8 Melfort Westerwolds Annual Ryegrass Yield 1998, 1999, 2000 and 2001

1999 Westerwolds Ryegrass Trials
Sown 1998, 1999 and 2000
Melfort, Sask

Variety	1998		1999		2000		2001		3 Year Average			4 Year Aver
	CUT#1 Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug 23/1999	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha) Aug 23/2000	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha) October 1, 2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Agraco	Total Forage Yield (kg DM/ha)
Aubade Westerwold	-	-	8242	16817	7305	8723	2700	2700	6082	9413	130	-
SW WWR9016 Westerwold	6773	10858	9643	13535	7092	8580	2877	2877	6537	8330	115	6968
Barwoltra Westerwold	6880	10453	8645	12220	7092	8568	2494	2494	6077	7761	107	6647
Barturbo Westerwold	6116	10094	8351	12676	6951	8319	2066	2066	5789	7687	106	6213
Max Westerwold	6177	9455	9028	13114	6151	7340	2585	2585	5021	7680	106	6283
Sabroso Westerwold	-	-	7870	12101	6734	8387	2323	2323	5645	7604	105	-
Barcimatra Westerwold	6395	9870	7599	11732	6979	8324	2156	2156	5578	7404	102	6118
Agraco Westerwold	**6094**	**10307**	**6956**	**10880**	**6813**	**8365**	**2717**	**2717**	**5495**	**7264**	**100**	**6033**
Baroldi Westerwold	5428	8735	6324	9130	8454	9553	2731	2731	5836	7138	98	6009
Andrea Westerwold	5819	7650	9632	9632	7447	7789	3722	3722	6934	7048	97	6741
Barspectra Westerwold	5727	9518	7247	11209	6254	7539	2326	2326	5276	7025	97	5710
Bar LWD 8611 Westerwold	-	-	7186	10181	6993	8502	2371	2371	5517	7018	97	-
Agri-Hilton Westerwold	-	-	7093	9403	6802	7937	2165	2165	5353	6502	90	-
Magnum Westerwold	6386	8500	7375	8837	6385	7142	2948	2948	5569	6309	87	5963
MEAN	7706	7706	7854	11519	6961	8219	2584	2584	5829	7441		6268
C.V. (%)	-	-	14	24	10	11	32	32		24		
LSD(0.05)	-	-	1530	3990	995	ns	1197	1197		2201		

Table 2.5. 9 Melfort Italian Ryegrass Yield 1998, 1999 and 2000

1998 Italian Ryegrass Trials
Sown 1998, 1999 and 2000
Melfort, Sask.

Variety	1998		1999		2000			2 Year Average			3 Year average	
	CUT#1 Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 23/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 23/2000	CUT#2 Forage Yield (kg DM/ha) Oct. 4/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Maris Ledger	Total Forage Yield (kg DM/ha)	% of Maris Ledger
Agrition	-	-	7102	12692	4017	1370	5387	5559	9039	108		
Barrextra Italian	7950	10573	7768	12128	4176	1561	5737	5972	8932	106	7152	110
Bar LMD 9307	-	-	9178	12864	3394	1548	4943	6286	8903	106		
Bartali Italian	5476	7982	8470	12665	3537	1535	5072	6004	8869	106	6340	99
LMT 95508	-		7346	11952	3773	1654	5428	5560	8690	103		
Bar LMD 8603	-	-	8915	11342	4142	1572	5714	6528	8528	101		
Maris Ledger Italian	**6743**	**9260**	**7701**	**11071**	**4300**	**1440**	**5739**	**6001**	**8405**	**100**	**6728**	**100**
Lemtal Italian	6304	8479	8197	12125	3147	1504	4651	5672	8388	100	6384	98
Bellem Italian	4890	6996	9221	11602	3249	1598	4847	6235	8225	98	6319	91
Barverdi Italian	5392	7434	8362	12214	2887	1303	4190	5625	8202	98	5981	93
Meribel Italian	4837	6779	8694	11532	3249	1519	4768	5971	8150	97	6100	90
Barzini Italian	6951	8975	8470	10063	4167	1429	5597	6318	7830	93	7006	96
Bartolini Italian	6181	8164	6722	10567	3169	1062	4232	4946	7399	88	5712	89
Sabalan Italian	6457	8723	-	-	-	-	-	-				-
Barmultra Italian	5712	8133	-	-				-				
Bartissimo Italian	5076	7256	-	-				-				
MEAN	5997	8230	8165	11755	3631	1469	5100	5898	8428		7919	
C.V. (%)			22	20	12	23	12		20			
LSD(0.05)			ns	ns	612	ns	849		ns			

Note: Data for 2001 was discarded due the the high CV.'s in the data. The Melfort area received less than 50% Normal rainfall

Table 2.5. 8 Melfort Westerwolds Annual Ryegrass Yield 1998, 1999, 2000 and 2001

1999 Westerwolds Ryegrass Trials
Sown 1998, 1999 and 2000
Melfort, Sask

Variety	1998		1999		2000		2001		3 Year Average			4 Year Aver
	CUT#1 Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug 23/1999	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha) Aug 23/2000	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha) October 1, 2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Agraco	Total Forage Yield (kg DM/ha)
Aubade Westerwold	-	-	8242	16817	7305	8723	2700	2700	6082	9413	130	-
SW WWR9016 Westerwold	6773	10858	9643	13535	7092	8580	2877	2877	6537	8330	115	6968
Barwoltra Westerwold	6880	10453	8645	12220	7092	8568	2494	2494	6077	7761	107	6647
Barturbo Westerwold	6116	10094	8351	12676	6951	8319	2066	2066	5789	7687	106	6213
Max Westerwold	6177	9455	9028	13114	6151	7340	2585	2585	5921	7680	106	6283
Sabroso Westerwold	-	-	7879	12101	6734	8387	2323	2323	5645	7604	105	-
Barcimatra Westerwold	6395	9870	7599	11732	6979	8324	2156	2156	5578	7404	102	6118
Agraco Westerwold	**6094**	**10307**	**6956**	**10680**	**6813**	**8365**	**2717**	**2717**	**5495**	**7254**	**100**	**6033**
Baroldi Westerwold	5428	8735	6324	9130	8454	9553	2731	2731	5836	7138	98	6009
Andrea Westerwold	5819	7650	9632	9632	7447	7789	3722	3722	6934	7048	97	6741
Barspectra Westerwold	5727	9518	7247	11209	6254	7539	2326	2326	5278	7025	97	5710
Bar LWD 8611 Westerwold	-	-	7186	10181	6993	8502	2371	2371	5517	7018	97	-
Agri-Hilton Westerwold	-	-	7093	9403	6802	7937	2165	2165	5353	6502	90	-
Magnum Westerwold	6386	8500	7375	8837	6385	7142	2948	2948	5569	6309	87	5963
MEAN	7706	7706	7854	11519	6961	8219	2584	2584	5829	7441		6268
C.V. (%)	-	-	14	24	10	11	32	32		24		
LSD(0.05)	-	-	1530	3990	995	ns	1197	1197		2201		

Table 2.5. 9 Melfort Italian Ryegrass Yield 1998, 1999 and 2000

1998 Italian Ryegrass Trials
Sown 1998, 1999 and 2000
Melfort, Sask.

Variety	1998		1999		2000			2 Year Average			3 Year average	
	CUT#1 Forage Yield (kg DM/ha) July 30/1998	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 23/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) Aug. 23/2000	CUT#2 Forage Yield (kg DM/ha) Oct. 4/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Maris Ledger	Total Forage Yield (kg DM/ha)	% of Maris Ledger
Agrition	-	-	7102	12692	4017	1370	5387	5559	9039	108		
Barrextra Italian	7950	10573	7768	12128	4176	1561	5737	5972	8932	106	7152	110
Bar LMD 9307	-	-	9178	12864	3394	1548	4943	6286	8903	106		
Bartali Italian	5476	7982	8470	12665	3537	1535	5072	6004	8869	106	6340	99
LMT 95508	-		7346	11952	3773	1654	5428	5560	8690	103		
Bar LMD 8603	-	-	8915	11342	4142	1572	5714	6528	8528	101		
Maris Ledger Italian	**6743**	**9260**	**7701**	**11071**	**4300**	**1440**	**5739**	**6001**	**8405**	**100**	**6728**	**100**
Lemtal Italian	6304	8479	8197	12125	3147	1504	4651	5672	8388	100	6384	98
Bellem Italian	4890	6996	9221	11602	3249	1598	4847	6235	8225	98	6319	91
Barverdi Italian	5392	7434	8362	12214	2887	1303	4190	5625	8202	98	5981	93
Meribel Italian	4837	6779	8694	11532	3249	1519	4768	5971	8150	97	6100	90
Barzini Italian	6951	8975	8470	10063	4167	1429	5597	6318	7830	93	7006	96
Bartolini Italian	6181	8164	6722	10567	3169	1062	4232	4946	7399	88	5712	89
Sabalan Italian	6457	8723	-	-	-	-	-	-				-
Barmultra Italian	5712	8133	-	-				-				
Bartissimo Italian	5076	7256	-	-				-				
MEAN	5997	8230	8165	11755	3631	1469	5100	5898	8428		7919	
C.V. (%)			22	20	12	23	12		20			
LSD(0.05)			ns	ns	612	ns	849		ns			

Note: Data for 2001 was discarded due the the high CV's in the data. The Melfort area received less than 50% Normal rainfall

2.6. Saskatoon

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
1999	Barley	1999-2001	2.6.1
1999	Barley Quality	1999 and 2001	2.6.2
1999	Oat	1999-2001	2.6.3
1999	Oat Quality	1999-2001	2.6.4
1999	Wheat/Triticale	1999 and 2001	2.6.5
1999	Wheat/Triticale	1999 and 2001	2.6.6
1999	Cereal Yield Summary	1999-2000	2.6.7
1996	Alfalfa	1997-1999	2.6.8
1997	Alfalfa	1998-200	2.6.9
1998	Alfalfa	1999-2001	2.6.10
1999	Alfalfa	2000-2001	2.6.11
2000	Alfalfa	2001	2.6.12
1998	Red Clover	1999	2.6.13
1999	Clover	2000	2.6.14
1996	Bird's-foot Trefoil	1997-1999	2.6.15
1996	Cicer milk-vetch	1997-1999	2.6.16
1997	Crested Wheatgrass	1998-2000	2.6.17
1999	Crested Wheatgrass	2000-2001	2.6.18
1995	Timothy, Orchardgrass and Meadow Foxtail	1997-1999	2.6.19
1998	Orchardgrass	1999-2001	2.6.20
1996	Timothy	1997-1999	2.6.21
1998	Timothy	1999-2001	2.6.22
1999	Timothy	2000-2001	2.6.23
2000	Timothy	2001	2.6.24
1999	Kentucky Bluegrass	2000	2.6.25
1999	Westerwolds Ryegrass	1999-2000	2.6.26
2001	Italian Ryegrass	2001	2.6.27

Each year new forage variety trials are established at this site. When looking at the data for trails established after 1998, or trials with less than three-years of data, please use caution in the interpretation of the results. In general, three years of data are required before there is sufficient confidence in the overall results form each trial.

The mean monthly temperatures for 2000, tended to be slightly higher than normal throughout much of growing period from May to the end of August (table A.2). Precipitation for 2001 was about 50% of the 30 year normal for this area.

AC Lacombe, AC Rosser, CDC Dolly and Bonanza yielded 101, 99, 99 and 99% of Virden when the data were averaged over the three years of the study (table 2.6.1). Forage quality tended to be similar between the different forage varieties (table 2.6.2).

Baler (SO93806) yielded 101% of CDC Bell when the data was averaged over the three years of the study (table 2.6.3). Forage quality was very similar between the varieties tested (table 2.6.4).

Overall, Baler and AC Lacombe yielded 101% of Virden when the data are averaged over all three years and varieties (table 2.6.7).

The two new varieties AgriMaster (PS96-21) and TMF 421 (CW 2227) yielded 108 and 104% of beaver when the data were averaged over the three years of the study (table 2.6.8).

Proleaf and Quattro HR yielded 103 and 102% of beaver when the data are averaged over all three years (table 2.6.9). Anchor yielded 106% of beaver in the same trial.

The old standard alfalfa varieties Anchor and Beaver tended to yield slightly better than the new test cultivars in the trial (table 2.6.10). Anchor yielded 108% of beaver when the data were pooled over years.

The new Bird's-foot trefoil line UGG 1301 (Langille) yielded 96% of the standard bird's-foot variety Leo (table 2.6.15).

Oxley II (LRC 92-1) and Windsor (UGG 1901) yielded 144 and 117% of Oxley, respectively (table 2.6.16). It is expected that these two new varieties will replace Oxley in the future.

AC Goliath (S-9240) yielded 103% of Kirk crested wheatgrass when the data were pooled over years (table 2.6.17).

The timothy cultivar Tuukka, yielded 106% of Climax (table 2.6.19), Jay orchardgrass yielded 119% of Kay when the data were averaged over data collection years.

The experimental orchardgrass cultivar OG 96-1 yielded 103% of Kay (table 2.6.20). The overall average orchardgrass forage yield was 3800 kg/ha when averaged over years and cultivars.

The newly registered timothy varieties AC Alliance and Grindstad (UGG 1703) yielded 112 and 106% of Climax timothy, respectively (table 2.6 21). The average total forage production was 5900 kg/ha each year of the project.

The newly registered timothy variety Joliette yielded 115% of Climax (table 2.6 22) the overall forage yields for this trial was 4400 kg/ha.

M121

IMPORTANT NOTE CONCERNING THE FOLLOWING PAGES

THE PAGES WHICH FOLLOW HAVE BEEN FILMED TWICE IN ORDER TO OBTAIN THE BEST REPRODUCTIVE QUALITY

USERS SHOULD CONSULT ALL THE PAGES REPRODUCED ON THE FICHE IN ORDER TO OBTAIN A COMPLETE READING OF THE TEXT.

REMARQUE IMPORTANTE CONCERNANT LES PAGES QUI SUIVENT

LES PAGES SUIVANTES ONT ÉTÉ REPRODUITES EN DOUBLE AFIN D'AMÉLIORER LA QUALITÉ DE REPRODUCTION

LES UTILISATEURS DOIVENT CONSULTER TOUTES LES PAGES REPRODUITES SUR LA FICHE AFIN D'OBTENIR LA LECTURE DU TEXTE INTÉGRAL

Micromedia
ProQuest

20 Victoria Street
Toronto, Ontario M5C 2N8
Tel.: (416) 362-5211
Toll Free: 1-800-387-2689
Fax: (416) 362-6161
Email: info@micromedia.on.ca

Table 2.6. 1 Saskatoon Green-feed Forage Yield 1999. 2000 and 20001

Barley Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001			3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) Aug 8/1999	Total Forage Yield (kg DM/ha) Aug 15/2000	Total Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Virden
AC Lacombe	7508	7320	3016	-	3016	5948	101
Virden	**7239**	**7081**	**3357**	-	**3357**	**5892**	**100**
AC Rosser	7069	7283	3150	-	3150	5834	99
CDC Dolly	7768	6730	2994	-	2994	5831	99
Bonanza	7845	6835	2784	-	2784	5822	99
Manley	7399	7016	2762	-	2762	5726	97
Seebe	6964	7001	3132	-	3132	5699	97
CDC Earl	6910	5978	3374	-	3374	5421	92
AC Ranger	-	-	3161	-	3161	-	
MEAN	7338	6906	3081	-	3081	5771	
C.V. (%)	7	5	10	-	10	7	
LSD(0.05)	ns	525	440	-	440	ns	

Table 2.6. 1 Saskatoon Green-feed Forage Yield 1999. 2000 and 20001

Barley Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001			3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) Aug 8/1999	Total Forage Yield (kg DM/ha) Aug 15/2000	Total Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Virden
AC Lacombe	7508	7320	3016	-	3016	5948	101
Virden	**7239**	**7081**	**3357**	**-**	**3357**	**5892**	**100**
AC Rosser	7069	7283	3150	-	3150	5834	99
CDC Dolly	7768	6730	2994	-	2994	5831	99
Bonanza	7845	6835	2784	-	2784	5822	99
Manley	7399	7016	2762	-	2762	5726	97
Seebe	6964	7001	3132	-	3132	5699	97
CDC Earl	6910	5978	3374	-	3374	5421	92
AC Ranger	-	-	3161	-	3161	-	
MEAN	7338	6906	3081	-	3081	5771	
C.V. (%)	7	5	10	-	10	7	
LSD(0.05)	ns	525	440	-	440	ns	

Table 2.6. 2 Saskatoon Barley Green-feed Quality 1999 and 2001

1999, 2000 and 2001 Barley Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	10	57	38	60	Bonanza	*	*	*	*
AC Lacombe	11	56	37	60	AC Lacombe	*	*	*	*
AC Rosser	11	57	39	59	AC Rosser	*	*	*	*
CDC Earl	12	55	36	60	CDC Earl	*	*	*	*
Virden	12	58	39	59	Virden	*	*	*	*
Manley	10	58	40	58	Manley	*	*	*	*
CDC Dolly	10	57	37	60	CDC Dolly	*	*	*	*
Seebe	11	56	37	60	Seebe	*	*	*	*
MEAN	11	57	38	60	MEAN				
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				

2001					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	10	40	22	67	Bonanza	10	48	30	63
AC Lacombe	11	37	20	68	AC Lacombe	11	46	29	64
AC Rosser	10	39	20	68	AC Rosser	11	48	30	63
CDC Earl	11	39	20	68	CDC Earl	12	47	28	64
Virden	10	38	20	68	Virden	11	48	30	63
Manley	10	39	20	68	Manley	10	48	30	63
CDC Dolly	10	38	20	68	CDC Dolly	10	48	28	64
Seebe	10	39	20	68	Seebe	11	48	29	64
AC Ranger	10	40	23	66	-	-	-	-	-
MEAN	10	39	21	67	MEAN	11	48	29	64
C.V. (%)					C.V. (%)	5	2	3	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.

F3

Table 2.6. 3 Saskatoon Oat Green-feed Yield 1999, 2000 and 2001

OatTrials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001			3 Year Average	
	Total Forage Yield (kg DM/ha) Aug 24/1999	Total Forage Yield (kg DM/ha) Aug 15/2000	Total Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of CDC Bell
S093806	8641	7104	2123	-	2123	5956	101
CDC Bell	**8288**	**7088**	**2297**	-	**2297**	**5891**	**100**
CDC Pacer	7755	7358	2491	-	2491	5868	100
AC Mustang	7934	6905	2283	-	2283	5707	97
MEAN	8155	7114	2299	-	2299	5856	
C.V. (%)	8	6	10	-	10	8	
LSD(0.05)	ns	ns	ns	-	ns	ns	

Table 2.6. 2 Saskatoon Barley Green-feed Quality 1999 and 2001

1999, 2000 and 2001 Barley Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	10	57	38	60	Bonanza	•	•	•	•
AC Lacombe	11	56	37	60	AC Lacombe	•	•	•	•
AC Rosser	11	57	39	59	AC Rosser	•	•	•	•
CDC Earl	12	55	36	60	CDC Earl	•	•	•	•
Virden	**12**	**58**	**39**	**59**	**Virden**	•	•	•	•
Manley	10	58	40	58	Manley	•	•	•	•
CDC Dolly	10	57	37	60	CDC Dolly	•	•	•	•
Seebe	11	56	37	60	Seebe	•	•	•	•
MEAN	11	57	38	60	MEAN				
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				

2001					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Bonanza	10	40	22	67	Bonanza	10	48	30	63
AC Lacombe	11	37	20	68	AC Lacombe	11	46	29	64
AC Rosser	10	39	20	68	AC Rosser	11	48	30	63
CDC Earl	11	39	20	68	CDC Earl	12	47	28	64
Virden	**10**	**38**	**20**	**68**	**Virden**	**11**	**48**	**30**	**63**
Manley	10	39	20	68	Manley	10	48	30	63
CDC Dolly	10	38	20	68	CDC Dolly	10	48	28	64
Seebe	10	39	20	68	Seebe	11	48	29	64
AC Ranger	10	40	23	66	-	-	-	-	-
MEAN	10	39	21	67	MEAN	11	48	29	64
C.V. (%)					C.V. (%)	5	2	3	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked with in location and year.

Table 2.6. 3 Saskatoon Oat Green-feed Yield 1999, 2000 and 2001

OatTrials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001			3 Year Average	
	Total Forage Yield (kg DM/ha) Aug 24/1999	Total Forage Yield (kg DM/ha) Aug 15/2000	Total Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of CDC Bell
S093806	8641	7104	2123	-	2123	5956	101
CDC Bell	**8288**	**7088**	**2297**	-	**2297**	**5891**	**100**
CDC Pacer	7755	7358	2491	-	2491	5868	100
AC Mustang	7934	6905	2283	-	2283	5707	97
MEAN	8155	7114	2299	-	2299	5856	
C.V. (%)	8	6	10	-	10	8	
LSD(0.05)	ns	ns	ns	-	ns	ns	

Table 2.6. 4 Saskatoon Oat Quality 1999, 2000 and 2001

1999, 2000 and 2001 Oat Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	53	32	62	AC Mustang	8	59	38	60
CDC Bell	**10**	**52**	**35**	**61**	**CDC Bell**	**7**	**59**	**39**	**59**
CDC Pacer	9	55	35	61	CDC Pacer	8	55	36	60
S093806	8	55	34	61	S093806	7	56	38	59
MEAN	9	54	34	61	MEAN	8	57	38	60
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2001					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	52	32	62	AC Mustang	9	55	34	61
CDC Bell	**11**	**49**	**31**	**63**	**CDC Bell**	**9**	**53**	**35**	**61**
CDC Pacer	11	51	29	64	CDC Pacer	9	54	34	62
S093806	11	50	30	63	S093806	9	53	34	61
MEAN	11	50	30	63	MEAN	9	54	34	61
C.V. (%)					C.V. (%)	6	3	4	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.
S093806 is now registered as CDC Baler

Table 2.6. 5 Saskatoon Wheat/Triticale Forage 1999 and 2001

1999 Wheat/Triticale Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) Aug 24/1999	CUT#1 Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of CDC Teal
Frank	8576	2198	-	2198	5387	109
Genesis	8116	2116	-	2116	5116	104
CDC Teal	**7755**	**2088**	-	**2088**	**4922**	**100**
MEAN	8149	2134	-	2134	5141	
C.V. (%)	6	8	-	8	7	
LSD(0.05)	ns	ns	-	ns	1082	

Table 2.6. 4 Saskatoon Oat Quality 1999, 2000 and 2001

1999, 2000 and 2001 Oat Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	53	32	62	AC Mustang	8	59	38	60
CDC Bell	10	52	35	61	**CDC Bell**	7	59	39	59
CDC Pacer	9	55	35	61	CDC Pacer	8	55	36	60
S093806	8	55	34	61	S093806	7	56	38	59
MEAN	9	54	34	61	MEAN	8	57	38	60
C.V. (%)					C.V. (%)				
LSD(0.05)					LSD(0.05)				
2001					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
AC Mustang	10	52	32	62	AC Mustang	9	55	34	61
CDC Bell	11	49	31	63	**CDC Bell**	9	53	35	61
CDC Pacer	11	51	29	64	CDC Pacer	9	54	34	62
S093806	11	50	30	63	S093806	9	53	34	61
MEAN	11	50	30	63	MEAN	9	54	34	61
C.V. (%)					C.V. (%)	6	3	4	1
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

S093806 is now registered as CDC Baler

Table 2.6. 5 Saskatoon Wheat/Triticale Forage 1999 and 2001

1999 Wheat/Triticale Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2001			2 Year Average	
	Total Forage Yield (kg DM/ha) Aug 24/1999	CUT#1 Forage Yield (kg DM/ha) July 31/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of CDC Teal
Frank	8576	2198	-	2198	5387	109
Genesis	8116	2116	-	2116	5116	104
CDC Teal	**7755**	**2088**	-	**2088**	**4922**	**100**
MEAN	8149	2134	-	2134	5141	
C.V. (%)	6	8	-	8	7	
LSD(0.05)	ns	ns	-	ns	1082	

Table 2.6. 6 Saskatoon Wheat/Triticale Forage Quality Table 1999 and 2001

1999, 2000 and 2001 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	8	55	38	60	Frank	*	*	*	*
Genesis	8	57	39	59	Genesis	*	*	*	*
CDC Teal	**7**	**61**	**45**	**56**	**CDC Teal**	*	*	*	*
MEAN	7	58	41	58	MEAN	*	*	*	*
C.V. (%)					C.V. (%)	*	*	*	*
LSD(0.05)					LSD(0.05)	*	*	*	*

2001					Over All Years				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	10	45	27	64	Frank	9	50	33	62
Genesis	10	46	27	65	Genesis	9	51	33	62
CDC Teal	10	45	27	64	CDC Teal	8	53	36	60
MEAN	10	45	27	65	MEAN	9	51	34	61
C.V. (%)					C.V. (%)	7	5	8	2
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.6. 7 Saskatoon Cereal Green Forage Summary Table 1999,2000 and 2001

Summary of the 1999, 2000 and 2001 Cereal Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001	3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) Aug. 9/1999	CUT#1 Forage Yield (kg DM/ha) Aug. 15/2000	CUT#1 Forage Yield (kg DM/ha) July 31/2001	Total Forage Yield (kg DM/ha)	% of Virden
S093806 (Oat)	8641	7104	2123	5956	101
AC Lacombe (Barley)	7508	7320	3016	5948	101
Virden (Barley)	7239	7081	3357	5892	100
CDC Bell (Oat)	8288	7088	2297	5891	100
CDC Pacer (Oat)	7755	7358	2491	5868	100
AC Rosser (Barley)	7069	7283	3150	5834	99
CDC Dolly (Barley)	**7768**	**6730**	**2994**	**5831**	**99**
Bonanza (Barley)	7845	6835	2784	5821	99
Manley (Barley)	7399	7016	2762	5726	97
AC Mustang (Oat)	7934	6905	2283	5707	97
Seebe (Barley)	6964	7001	3132	5699	97
CDC Earl (Barley)	6910	5978	3374	5421	92
Frank (Triticale)	8576	-	2198	-	-
Genesis (CPS)	8116	-	2116	-	-
CDC Teal (HRS)	7755	-	2088	-	-
AC Ranger (Barley)	-	-	3161	-	
MEAN	7718	6975	2708	5799	

Note: S093806 is now registered as CDC Baler

Table 2.6. 6 Saskatoon Wheat/Triticale Forage Quality Table 1999 and 2001

1999, 2000 and 2001 Wheat/Triticale Trials
Test of Forage Green Feed Quality
Saskatoon, Sask.

1999					2000				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	8	55	38	60	Frank	*	*	*	*
Genesis	8	57	39	59	Genesis	*	*	*	*
CDC Teal	**7**	**61**	**45**	**56**	**CDC Teal**	*	*	*	*
MEAN	7	58	41	58	MEAN	*	*	*	*
C.V. (%)					C.V. (%)	*	*	*	*
LSD(0.05)					LSD(0.05)	*	*	*	*
2001					**Over All Years**				
Variety	CP	NDF	ADF	TDN	Variety	CP	NDF	ADF	TDN
Frank	10	45	27	64	Frank	9	50	33	62
Genesis	10	46	27	65	Genesis	9	51	33	62
CDC Teal	**10**	**45**	**27**	**64**	**CDC Teal**	**8**	**53**	**36**	**60**
MEAN	10	45	27	65	MEAN	9	51	34	61
C.V. (%)					C.V. (%)	7	5	8	2
LSD(0.05)					LSD(0.05)	ns	ns	ns	ns

Note: The quality samples collected on each variety were bulked within location and year.

Table 2.6. 7 Saskatoon Cereal Green Forage Summary Table 1999,2000 and 2001

Summary of the 1999, 2000 and 2001 Cereal Trials
Test of Forage Green Feed Yields
Saskatoon, Sask.

Variety	1999	2000	2001	3 Year Average	
	CUT#1 Forage Yield (kg DM/ha) Aug. 9/1999	CUT#1 Forage Yield (kg DM/ha) Aug. 15/2000	CUT#1 Forage Yield (kg DM/ha) July 31/2001	Total Forage Yield (kg DM/ha)	% of Virden
S093806 (Oat)	8641	7104	2123	5956	101
AC Lacombe (Barley)	7508	7320	3016	5948	101
Virden (Barley)	7239	7081	3357	5892	100
CDC Bell (Oat)	8288	7088	2297	5891	100
CDC Pacer (Oat)	7755	7358	2491	5868	100
AC Rosser (Barley)	7069	7283	3150	5834	99
CDC Dolly (Barley)	**7768**	**6730**	**2994**	**5831**	**99**
Bonanza (Barley)	7845	6835	2784	5821	99
Manley (Barley)	7399	7016	2762	5726	97
AC Mustang (Oat)	7934	6905	2283	5707	97
Seebe (Barley)	6964	7001	3132	5699	97
CDC Earl (Barley)	6910	5978	3374	5421	92
Frank (Triticale)	8576	-	2198	-	-
Genesis (CPS)	8116	-	2116	-	-
CDC Teal (HRS)	7755	-	2088	-	-
AC Ranger (Barley)	-	-	3161	-	
MEAN	7718	6975	2708	5799	

Note: S093806 is now registered as CDC Baler

Table 2.6. 8 Saskatoon Alfalfa 1996

WFT ALFALFA 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 30-Jun-99	1999 DM YIELD KG/HA CUT 2 25-Aug-99	1999 DM YIELD KG/HA TOTAL	3 Year Average Total Yield	3 Year Average % OF BEAVER
92-28	6724	4035	6222	3211	9433	6731	116
ANCHOR	6804	3699	5566	4065	9631	6711	116
3B16 (Rainer)	6632	3783	5535	3609	9144	6520	113
PVN1204	6255	3597	5838	3820	9658	6503	112
PVN1206	6817	3355	5784	3536	9320	6497	112
CW3313	7033	3671	5112	3588	8700	6468	112
CW3304	7140	3477	4837	3921	8758	6458	111
93-110	6699	3623	5528	3248	8776	6366	110
92-132 (Banquet)	6345	3339	5965	3391	9356	6347	110
PS96-21	6871	2846	5576	3495	9071	6263	108
XAL46	6206	3759	5141	3013	8154	6040	104
PVN1205	5846	2841	5728	3697	9426	6038	104
CW2227	6456	3032	5387	3126	8513	6000	104
BEAVER	**5702**	**3720**	**5301**	**2663**	**7963**	**5795**	**100**
RAMBLER	4921	2591	5669	2655	8324	5279	91
94GG (Runner)	5465	2526	5266	2490	7756	5249	91
SD201	3443	1645	5526	1710	7237	4108	71
MEAN	6198	3267	5528	3249	8777	6081	
CV (%)	11	23	19	16	15	9	
LSD (0.05)	962	890	ns	730	ns	ns	

Table 2.6. 9 Saskatoon Alfalfa 1997

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1997

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 08/29/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	6273	9817	4351	3281	7632	7907	106
PROLEAF	6146	9888	3657	3360	7017	7684	103
QUATTRO HR	6768	9556	3423	3078	6501	7608	102
HAYGRAZER	5613	9408	3798	3713	7511	7511	101
BEAVER	**6447**	**9384**	**3476**	**2984**	**6460**	**7430**	**100**
ABI 9141	6212	9255	3217	2982	6199	7222	97
SF 9001	5367	9571	3675	2924	6599	7179	97
NS 3317	4968	9092	3658	3071	6729	6930	93
SPUR	5167	8348	3638	3059	6698	6738	91
PVN 1209	5169	8668	3148	3059	6207	6681	90
PVN 1208	5664	8357	2992	2761	5752	6591	89
53V08	5644	8229	2908	2702	5610	6494	87
PVN 1207	4229	8402	3358	3173	6531	6387	86
97CR1	4854	7771	3193	2877	6070	6232	84
RAMBLER	3436	7561	3000	2559	5559	5519	74
MEAN	5472	8887	3433	3039	6472	6944	
CV (%)	23	10	20	22	19		
LSD (0.05)	1768	1282	976	ns	1748		

Table 2.6. 8 Saskatoon Alfalfa 1996

WFT ALFALFA 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 30-Jun-99	CUT 2 25-Aug-99	TOTAL	3 Year Average Total Yield	% OF BEAVER
92-28	6724	4035	6222	3211	9433	6731	116
ANCHOR	6804	3699	5566	4065	9631	6711	116
3B16 (Rainer)	6632	3783	5535	3609	9144	6520	113
PVN1204	6255	3597	5838	3820	9658	6503	112
PVN1206	6817	3355	5784	3536	9320	6497	112
CW3313	7033	3671	5112	3588	8700	6468	112
CW3304	7140	3477	4837	3921	8758	6458	111
93-110	6699	3623	5528	3248	8776	6366	110
92-132 (Banquet)	6345	3339	5965	3391	9356	6347	110
PS96-21	6871	2846	5576	3495	9071	6263	108
XAL46	6206	3759	5141	3013	8154	6040	104
PVN1205	5846	2841	5728	3697	9426	6038	104
CW2227	6456	3032	5387	3126	8513	6000	104
BEAVER	5702	3720	5301	2663	7963	5795	100
RAMBLER	4921	2591	5669	2655	8324	5279	91
94GG (Runner)	5465	2526	5266	2490	7756	5249	91
SD201	3443	1645	5526	1710	7237	4108	71
MEAN	6198	3267	5528	3249	8777	6081	
CV (%)	11	23	19	16	15	9	
LSD (0.05)	962	890	ns	730	ns	ns	

Table 2.6. 9 Saskatoon Alfalfa 1997

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1997

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 08/29/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	6273	9817	4351	3281	7632	7907	106
PROLEAF	6146	9888	3657	3360	7017	7684	103
QUATTRO HR	6768	9556	3423	3078	6501	7608	102
HAYGRAZER	5613	9408	3798	3713	7511	7511	101
BEAVER	6447	9384	3476	2984	6460	7430	100
ABI 9141	6212	9255	3217	2982	6199	7222	97
SF 9001	5367	9571	3675	2924	6599	7179	97
NS 3317	4968	9092	3658	3071	6729	6930	93
SPUR	5167	8348	3638	3059	6698	6738	91
PVN 1209	5169	8668	3148	3059	6207	6681	90
PVN 1208	5664	8357	2992	2761	5752	6591	89
53V08	5644	8229	2908	2702	5610	6494	87
PVN 1207	4229	8402	3358	3173	6531	6387	86
97CR1	4854	7771	3193	2877	6070	6232	84
RAMBLER	3436	7561	3000	2559	5559	5519	74
MEAN	5472	8887	3433	3039	6472	6944	
CV (%)	23	10	20	22	19		
LSD (0.05)	1768	1282	976	ns	1748		

Table 2.6. 10 Saskatoon Alfalfa 1998

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 12/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 15/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	6961	10991	2990	6956	1939	1483	3422	3963	7123	108
BEAVER	7203	11104	2641	6258	1355	1084	2438	3733	6600	100
4321	6943	10972	2461	5925	1565	1300	2865	3656	6587	100
ZG 9721	6982	10963	2608	6157	1453	1039	2492	3681	6537	99
SPREDOR GT	6779	10973	2622	6122	1342	1032	2374	3581	6490	98
WL 232HQ	6838	10940	2181	5520	1329	1074	2403	3449	6288	95
53Q60	6042	9876	2307	5855	1641	1399	3041	3330	6257	95
5301	6361	10682	2438	5912	1180	998	2178	3326	6257	95
ZG 9711C	7125	11006	2532	5799	1152	789	1941	3603	6249	95
CW 5440	5959	10015	2211	5676	1564	1300	2864	3245	6185	94
RAMBLER	7501	10794	2676	5370	1621	679	2300	3933	6155	93
R801	6568	10001	2536	6101	1448	892	2340	3517	6147	93
CW 5302	6236	10246	2135	4730	1211	1055	2266	3194	5747	87
MEAN	6730	10658	2487	5875	1446	1086	2532	3554	6355	
CV (%)	7	6	18	14	20	18	18			
LSD (0.05)	677	874	649	1152	408	274	654			

Table 2.6. 11 Saskatoon Alfalfa 1999

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 30/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 15/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
SL 9902	3713	6782	2593	1845	4438	3668	5610	100
Beaver	4341	7428	2169	1588	3757	3685	5593	100
CW 4223	3588	6238	2509	1882	4391	3529	5315	95
SL 9901	3757	6419	2481	1668	4149	3530	5284	94
DS 9924	3587	6838	2173	1500	3672	3361	5255	94
DS 9925	3930	6898	2164	1352	3516	3422	5207	93
2065 MF	3756	6795	2017	1331	3347	3289	5071	91
CW 6408	2638	5279	2411	2214	4625	3174	4952	89
3030	3472	6182	1814	1790	3603	3147	4893	87
Anchor	3767	6367	1821	1580	3400	3217	4883	87
R923	3533	6414	1943	1408	3350	3161	4882	87
SL 9900	3260	5587	2156	1684	3840	3135	4714	84
C304	3359	5952	1878	1553	3431	3059	4692	84
DS 9927	3329	6028	1954	1382	3336	3044	4682	84
DS 9928	3653	6179	1731	1318	3049	3045	4614	82
C227	3326	5693	1825	1698	3523	3031	4608	82
Gibraltar	3419	6180	1561	1351	2912	2915	4546	81
ZG 9831	3223	5820	1956	1170	3126	2925	4473	80
Rambler	3692	5998	1887	933	2820	2987	4409	79
4241	3288	6056	1615	1116	2731	2994	4393	79
Geneva	3252	5821	1676	1286	2961	2846	4391	79
DS 9929	3283	5481	1816	1415	3231	2904	4356	78
R922	2817	5076	1788	1429	3217	2704	4147	74
DS 9923	2832	4857	1441	1310	2751	2495	3804	68
MEAN	3450	6098	1974	1492	3466	3129	4782	
CV (%)	18	17	37	28	31			
LSD (0.05)	894	1476	1040	598	1520			

Table 2.6. 10 Saskatoon Alfalfa 1998

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 12/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 15/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	6961	10991	2990	6956	1939	1483	3422	3963	7123	108
BEAVER	7203	11104	2641	6258	1355	1084	2438	3733	6600	100
4321	6943	10972	2461	5925	1565	1300	2865	3656	6587	100
ZG 9721	6982	10963	2608	6157	1453	1039	2492	3681	6537	99
SPREDOR GT	6779	10973	2622	6122	1342	1032	2374	3581	6490	98
WL 232HQ	6838	10940	2181	5520	1329	1074	2403	3449	6288	95
53Q60	6042	9876	2307	5855	1641	1399	3041	3330	6257	95
5301	6361	10682	2438	5912	1180	998	2178	3326	6257	95
ZG 9711C	7125	11006	2532	5799	1152	789	1941	3603	6249	95
CW 5440	5959	10015	2211	5676	1564	1300	2864	3245	6185	94
RAMBLER	7501	10794	2676	5370	1621	679	2300	3933	6155	93
R801	6568	10001	2536	6101	1448	892	2340	3517	6147	93
CW 5302	6236	10246	2135	4730	1211	1055	2266	3194	5747	87
MEAN	6730	10658	2487	5875	1446	1086	2532	3554	6355	
CV (%)	7	6	18	14	20	18	18			
LSD (0.05)	677	874	649	1152	408	274	654			

Table 2.6. 11 Saskatoon Alfalfa 1999

Alfalfa Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 30/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 15/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
SL 9902	3713	6782	2593	1845	4438	3668	5610	100
Beaver	**4341**	**7428**	**2169**	**1588**	**3757**	**3685**	**5593**	**100**
CW 4223	3588	6238	2509	1882	4391	3529	5315	95
SL 9901	3757	6419	2481	1668	4149	3530	5284	94
DS 9924	3587	6838	2173	1500	3672	3361	5255	94
DS 9925	3930	6898	2164	1352	3516	3422	5207	93
2065 MF	3756	6795	2017	1331	3347	3289	5071	91
CW 6408	2638	5279	2411	2214	4625	3174	4952	89
3030	3472	6182	1814	1790	3603	3147	4893	87
Anchor	3767	6367	1821	1580	3400	3217	4883	87
R923	3533	6414	1943	1408	3350	3161	4882	87
SL 9900	3260	5587	2156	1684	3840	3135	4714	84
C304	3359	5952	1878	1553	3431	3059	4692	84
DS 9927	3329	6028	1954	1382	3336	3044	4682	84
DS 9928	3653	6179	1731	1318	3049	3045	4614	82
C227	3326	5693	1825	1698	3523	3031	4608	82
Gibraltar	3419	6180	1561	1351	2912	2915	4546	81
ZG 9831	3223	5820	1956	1170	3126	2925	4473	80
Rambler	3692	5998	1887	933	2820	2987	4409	79
4241	3288	6056	1615	1116	2731	2994	4393	79
Geneva	3252	5821	1676	1286	2961	2846	4391	79
DS 9929	3283	5481	1816	1415	3231	2904	4356	78
R922	2817	5076	1788	1429	3217	2704	4147	74
DS 9923	2832	4857	1441	1310	2751	2495	3804	68
MEAN	3450	6098	1974	1492	3466	3129	4782	
CV (%)	18	17	37	28	31			
LSD (0.05)	894	1476	1040	598	1520			

Table 2.6. 12 Saskatoon Alfalfa 2000

WFT ALFALFA 2000 SASKATOON SK AREA - 2

VARIETY	2001 DM YIELD (kg ha^{-1}) CUT 1 27 JUN 01	CUT 2 16 AUG 01	TOTAL	% OF BEAVER
Rambler	3654	2024	5679	107
Beaver	3398	1924	5322	100
3008	3065	2142	5207	98
DS030-BY	3070	2033	5103	96
Rangelander	3119	1964	5083	96
DS2000	3215	1857	5071	95
CW 73038	3080	1933	5012	94
9603	2954	1941	4895	92
DK 134	2943	1908	4851	91
DS380-BY	2877	1964	4841	91
DK 124	2969	1850	4819	91
DS028-BY	3095	1713	4808	90
EX101	2852	1909	4761	89
54V54	2773	1980	4752	89
DS029-BY	2915	1809	4724	89
AC Blue J	2822	1811	4633	87
DS027-BY	2634	1793	4426	83
MEAN	3025	1915	4940	
CV (%)	17.1	13.6	14.7	
LSD (0.05)	735	370	1033	

Table 2.6. 13 Saskatoon Clover 1998

WFT RED CLOVER 1998 SASKATOON SK AREA-2

VARIETY	STAND 0-3	1999 DM YIELD KG/HA CUT 1 7-Jul-99	CUT 2 25-Aug-99	CUT 3	TOTAL	% OF ALTASWEDE
GORBY	3	4789	3353	.	8142	120
WILDCAT	3	4032	3752	.	7785	115
ALTASWEDE	2	4423	2367	[illegible]	6790	100
MEAN	3	4415	3157	.	7572	
CV (%)	5	6	7	.	6	
LSD (0.05)	NS	430	408	.	774	

Table 2.6. 13 Saskatoon Clover 1998

WFT RED CLOVER 1998 SASKATOON SK AREA-2

		1999 DM YIELD KG/HA				
VARIETY	STAND 0-3	CUT 1 7-Jul-99	CUT 2 25-Aug-99	CUT 3	TOTAL	% OF LTASWEDE
GORBY	3	4789	3353	.	8142	120
WILDCAT	3	4032	3752	.	7785	115
ALTASWEDE	**2**	**4423**	**2367**	**.**	**6790**	**100**
MEAN	3	4415	3157	.	7572	
CV (%)	5	6	7	.	6	
LSD (0.05)	NS	430	408	.	774	

Table 2.6. 14 Saskatoon Clover 1999

Clover Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	1999			
	CUT#1 Forage Yield (kg DM/ha) 06/30/00	CUT#2 Forage Yield (kg DM/ha) 08/15/00	Total Forage Yield (kg DM/ha)	% of Altaswede
Vivi (Red)	2158	2117	4275	119
Altaswede	**1518**	**2061**	**3579**	**100**
Aurora	447	1861	2308	64
NSCL 29	385	1664	2049	57
BOR 2222	305	1643	1948	54
MEAN	962	1869	2832	
CV (%)	19	17	14	
LSD (0.05)	287	497	626	

Table 2.6. 14 Saskatoon Clover 1999

Clover Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	1999			
	CUT#1 Forage Yield (kg DM/ha) 06/30/00	CUT#2 Forage Yield (kg DM/ha) 08/15/00	Total Forage Yield (kg DM/ha)	% of Altaswede
Vivi (Red)	2158	2117	4275	119
Altaswede	1518	2061	3579	100
Aurora	447	1861	2308	64
NSCL 29	385	1664	2049	57
BOR 2222	305	1643	1948	54
MEAN	962	1869	2832	
CV (%)	19	17	14	
LSD (0.05)	287	497	626	

Table 2.6. 15 Saskatoon Bird's-foot Trefoil 1996

WFT BIRDSFOOT TREFOIL 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA			3 Year Average	
			CUT 1 04-Aug-99	CUT 2	TOTAL	Total Yield	% OF LEO
LEO	4167	1417	2162	.	2162	2582	100
UGG 1301 (AC Langille)	4416	1401	1620	.	1620	2479	96
MEAN	4291	1409	1891	.	1891	2531	
CV (%)	8	39	19	.	19	14	
LSD (0.05)	ns	ns	ns	.	ns	ns	

Table 2.6. 16 Saskatoon Cicer Milk-Vetch 1996

WFT CICER MILKVETCH 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 04-Aug-99	CUT 2	TOTAL	3 Year Average Total Year	% OF OXLEY
LRC 92-1	3149	1647	4666	.	4666	3154	144
LRC 93-1	3310	1602	4050	.	4050	2987	136
UGG 1901 (Windsor)	2487	1502	3694	.	3694	2561	117
OXLEY	2069	1043	3464	.	3464	2192	100
MEAN	2754	1448	3969	.	3969	2724	
CV (%)	10	19	22	.	22	14	
LSD (0.05)	454	433	ns	.	ns	615	

Table 2.6. 15 Saskatoon Bird's-foot Trefoil 1996

WFT BIRDSFOOT TREFOIL 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA			3 Year Average	
			CUT 1 04-Aug-99	CUT 2	TOTAL	Total Yield	% OF LEO
LEO	**4167**	**1417**	**2162**	.	**2162**	**2582**	**100**
UGG 1301 (AC Langille)	4416	1401	1620	.	1620	2479	96
MEAN	4291	1409	1891	.	1891	2531	
CV (%)	8	39	19	.	19	14	
LSD (0.05)	ns	ns	ns	.	ns	ns	

Table 2.6. 16 Saskatoon Cicer Milk-Vetch 1996

WFT CICER MILKVETCH 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 04-Aug-99	CUT 2	TOTAL	3 Year Average Total Year	% OF OXLEY
LRC 92-1	3149	1647	4666	.	4666	3154	144
LRC 93-1	3310	1602	4050	.	4050	2987	136
UGG 1901 (Windsor)	2487	1502	3694	.	3694	2561	117
OXLEY	**2069**	**1043**	**3464**	.	**3464**	**2192**	**100**
MEAN	2754	1448	3969	.	3969	2724	
CV (%)	10	19	22	.	22	14	
LSD (0.05)	454	433	ns	.	ns	615	

Table 2.6. 17 Saskatoon Crested Wheatgrass 1997

Timothy Variety Adaptation Test
Saskatoon , SK
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
JOLIETTE	7624	12043	1398	2356	167	-	167	3063	4855	115
BOR 72002	6767	10704	1689	2330	139	-	139	2865	4391	104
BOR 94301	6947	11001	985	1689	115	-	115	2682	4268	101
CLIMAX	**6279**	**10006**	**1626**	**2455**	**208**	**-**	**208**	**2704**	**4223**	**100**
MEAN	6904	10938	1424	2208	158	-	158	2829	4434	
CV (%)	8	8	26	19	41	-	41			
LSD (0.05)	841	1351	591	658	ns	-	ns			

Table 2.6. 18 Saskatoon Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) June 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	7865	10489	2582	-	2582	6535	150
Vavilov	5732	8782	2125	-	2125	5454	126
Douglas	**6246**	**7375**	**1315**	**-**	**1315**	**4345**	**100**
MEAN	6614	8882	2007	-	2007	5445	
CV (%)	10	9	9	-	9		
LSD (0.05)	1094	1439	319	-	319		

Table 2.6. 17 Saskatoon Crested Wheatgrass 1997

Timothy Variety Adaptation Test
Saskatoon, SK
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
JOLIETTE	7624	12043	1398	2356	167	-	167	3063	4855	115
BCR 72002	6767	10704	1689	2330	139	-	139	2865	4391	104
BCR 94301	6947	11001	985	1689	115	-	115	2682	4268	101
CLIMAX	6279	10006	1626	2455	208	-	208	2704	4223	100
MEAN	6904	10938	1424	2208	158	-	158	2829	4434	
CV (%)	8	8	26	19	41	-	41			
LSD (0.05)	841	1351	591	658	ns	-	ns			

Table 2.6. 18 Saskatoon Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Saskatoon, SK.
Sown May 1999

Variety	2000		2001			2 Year Average	
	CUT#1 Forage Yield (kg DM/ha) June 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
Kirk	7865	10489	2582	-	2582	6535	150
Vavilov	5732	8782	2125	-	2125	5454	126
Douglas	6246	7375	1315	-	1315	4345	100
MEAN	6614	8882	2007	-	2007	5445	
CV (%)	10	9	9	-	9		
LSD (0.05)	1094	1439	319	-	319		

Table 2.6. 19 Saskatoon Timothy, Orchardgrass and Meadow Foxtail 1995

WFT TIMOTHY, ORCHARDGRASS & MEADOW FOXTAIL 1995 SASKATOON SK AREA-2*

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 21-Jun-99	CUT 2 09-Sep-99	TOTAL	3 Year Average Total Yield	% OF KAY
UGG 1701	6602	2873	6306	398	6704	5393	133
Tuuka	5833	2747	6638	378	7015	5198	128
Climax	6075	2230	6082	345	6427	4911	121
UGG 1702	5388	2659	6432	166	6598	4882	121
BOR 80102	5865	2518	6002	202	6204	4862	120
Jay	7357	2029	4398	642	5040	4809	119
Kay	6162	2643	2902	431	3334	4046	100
Mountain	3162	2594	4425	1062	5487	3748	93
PS 951	6180	2171	2401	284	2685	3679	91
Dan	2985	2873	4085	988	5073	3644	90
Haka	6397	1803	2060	359	2420	3540	87
Roughrider	3756	2043	1908	582	2490	2763	68
MEAN	4523	2295	4470	486	4956	4289	
CV (%)	20	26	18	44	18	14	
LSD (0.05)	1180	ns	1047	274	1143	749	

* NOTE: THIS TRIAL RE-SEEDED IN 1996

Table 2.6. 20 Saskatoon Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Saskatoon , SK
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
	June 8/2000		June 8/2000		July 9/2001	-				
OG 96-1	5694	9872	2505	3098	416	-	416	2872	4462	103
KAY	5273	9157	2186	3373	428	-	428	2629	4319	100
OG 96-3	5157	8060	1880	2588	158	-	158	2398	3602	83
OFI 93L	4531	8158	1175	2054	237	-	237	1981	3483	81
OG 96-2	4904	7580	1855	2458	127	-	127	2295	3388	78
MEAN	5112	8565	1920	2714	273	-	273	2435	3851	
CV (%)	6	7	17	12	52	-	52			
LSD (0.05)	478	974	495	494	221	-	221			

Table 2.6. 19 Saskatoon Timothy, Orchardgrass and Meadow Foxtail 1995

WFT TIMOTHY, ORCHARDGRASS & MEADOW FOXTAIL 1995 SASKATOON SK AREA-2*

VARIETY	1997	1998	1999 DM YIELD KG/HA			3 Year Average	
	Total Yield	Total Yield	CUT 1 21-Jun-99	CUT 2 09-Sep-99	TOTAL	Total Yield	% OF KAY
UGG 1701	6602	2873	6306	398	6704	5393	133
Tuuka	5833	2747	6638	378	7015	5198	128
Climax	6075	2230	6082	345	6427	4911	121
UGG 1702	5388	2659	6432	166	6598	4882	121
BOR 80102	5865	2518	6002	202	6204	4862	120
Jay	7357	2029	4398	642	5040	4809	119
Kay	**6162**	**2643**	**2902**	**431**	**3334**	**4046**	**100**
Mountain	3162	2594	4425	1062	5487	3748	93
PS 951	6180	2171	2401	284	2685	3679	91
Dan	2985	2873	4085	988	5073	3644	90
Haka	6397	1803	2060	359	2420	3540	87
Roughrider	3756	2043	1908	582	2490	2763	68
MEAN	4523	2295	4470	486	4956	4289	
CV (%)	20	26	18	44	18	14	
LSD (0.05)	1180	ns	1047	274	1143	749	

* NOTE: THIS TRIAL RE-SEEDED IN 1996

Table 2.6. 20 Saskatoon Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Saskatoon , SK.
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
	June 8/2000		June 8/2000		July 9/2001	-				
OG 96-1	5694	9872	2505	3098	416	-	416	2872	4462	103
KAY	**5273**	**9157**	**2186**	**3373**	**428**	**-**	**428**	**2629**	**4319**	**100**
OG 96-3	5157	8060	1880	2588	158	-	158	2398	3602	83
OFI 93L	4531	8158	1175	2054	237	-	237	1981	3483	81
OG 96-2	4904	7580	1855	2458	127	-	127	2295	3388	78
MEAN	5112	8565	1920	2714	273	-	273	2435	3851	
CV (%)	6	7	17	12	52	-	52			
LSD (0.05)	478	974	495	494	221	-	221			

Table 2.6. 21 Saskatoon Timothy 1996

WFT TIMOTHY 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA			3 Year Average	
			CUT 1 21-Jun-99	CUT 2 09-Sep-99	CUT 3 TOTAL	Total Yield	% OF CLIMAX
AC ALLIANCE	5150	3636	7217	2678	9894	6227	112
BOR 94322	4686	4416	7847	1515	9362	6155	111
Grinstad (UGG 1703)	4306	3957	7404	1937	9341	5868	106
BOR 1342	4276	4140	8011	869	8880	5765	104
CLIMAX	**4645**	**3786**	**7048**	**1173**	**8221**	**5551**	**100**
MEAN	3010	3987	7505	1634	9139	5913	
CV (%)	10	13	10	30	10	7	
LSD (0.05)	ns	ns	ns	748	ns	ns	

Table 2.6. 22 Saskatoon Timothy 1998

Timothy Variety Adaptation Test
Saskatoon , SK
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
JOLIETTE	7624	12043	1398	2356	167	-	167	3063	4855	115
BOR 72002	6767	10704	1689	2330	139	-	139	2865	4391	104
BOR 94301	6947	11001	985	1689	115	-	115	2682	4268	101
CLIMAX	**6279**	**10006**	**1626**	**2455**	**208**	**-**	**208**	**2704**	**4223**	**100**
MEAN	6904	10938	1424	2208	158	-	158	2829	4434	
CV (%)	8	8	26	19	41	-	41			
LSD (0.05)	841	1351	591	658	ns	-	ns			

Table 2.6. 21 Saskatoon Timothy 1996

WFT TIMOTHY 1996 SASKATOON SK AREA-2

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA			3 Year Average	
			CUT 1 21-Jun-99	CUT 2 09-Sep-99	CUT 3 TOTAL	Total Yield	% OF CLIMAX
AC ALLIANCE	5150	3636	7217	2678	9894	6227	112
BOR 94322	4686	4416	7847	1515	9362	6155	111
Grinstad (UGG 1703)	4306	3957	7404	1937	9341	5868	106
BOR 1342	4276	4140	8011	869	8880	5765	104
CLIMAX	4645	3786	7048	1173	8221	5551	100
MEAN	3010	3987	7505	1634	9139	5913	
CV (%)	10	13	10	30	10	7	
LSD (0.05)	ns	ns	ns	748	ns	ns	

Table 2.6. 22 Saskatoon Timothy 1998

Timothy Variety Adaptation Test
Saskatoon , SK
Sown May 1998

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
JOLIETTE	7624	12043	1398	2356	167	-	167	3063	4855	115
BOR 72002	6767	10704	1689	2330	139	-	139	2865	4391	104
BOR 94301	6947	11001	985	1689	115	-	115	2682	4268	101
CLIMAX	**6279**	**10006**	**1626**	**2455**	**208**	**-**	**208**	**2704**	**4223**	**100**
MEAN	6904	10938	1424	2208	158	-	158	2829	4434	
CV (%)	8	8	26	19	41	-	41			
LSD (0.05)	841	1351	591	658	ns	-	ns			

Table 2.6. 23 Saskatoon Timothy 1999

Timothy Variety Adaptation Test
Saskatoon , SK.
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Climax	**4416**	**6297**	**318**	**-**	**318**	**2367**	**3308**	**100**
GPT18905	3915	4818	417	-	417	2166	2618	79
GPT18906	3890	4668	378	-	378	2134	2523	76
MEAN	4074	5261	371	-	371	2222	2816	
CV (%)	13	10	31	-	31			
LSD (0.05)	891	900	ns	-	ns			

Table 2.6. 23 Saskatoon Timothy 1999

Timothy Variety Adaptation Test
Saskatoon , SK
Sown May 1999

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 29/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 4/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
Climax	**4416**	**6297**	**318**	**-**	**318**	**2367**	**3308**	**100**
GPT18905	3915	4818	417	-	417	2166	2618	79
GPT18906	3890	4668	378	-	378	2134	2523	76
MEAN	4074	5261	371	-	371	2222	2816	
CV (%)	13	10	31	-	31			
LSD (0.05)	891	900	ns	-	ns			

Table 2.6. 24 Saskatoon Timothy 2000

WFT TIMOTHY 2000 SASKATOON SK AREA - 2

VARIETY	2001 DM YIELD (kg ha^{-1}) CUT 1 27 JUN 01	TOTAL	% OF CLIMAX
BOR 94374	2243	2243	132
BOR 94372	2214	2214	131
CLIMAX	1693	1693	100
PBQX-1	1433	1433	85
PCQX-39	1428	1428	84
MOTIM	1157	1157	68
MEAN	1694	1694	
CV (%)	16.6	16.6	
LSD (0.05)	425	425	

Table 2.6. 25 Saskatoon Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Saskatoon , SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 09/05/2000	Total Forage Yield (kg DM/ha)	% of Troy
KVER003	1924	1825	3749	105
TROY	2366	1212	3578	100
MEAN	2145	1519	3664	
CV (%)	16	10	13	
LSD (0.05)	ns	346	ns	

Table 2.6. 26 Saskatoon Westerwolds Ryegrass 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Saskatoon , SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 09/06/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
AUBADE	7977	5431	1429	6860		100
NSCL 30	8046	5064	1615	6679		97
MEAN	8012	5247	1522	6769		
CV (%)	4	6	7	5		
LSD (0.05)	ns	ns	ns	ns		

Table 2.6. 25 Saskatoon Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Saskatoon , SK.
Sown May 1999

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 09/05/2000	Total Forage Yield (kg DM/ha)	% of Troy
KVER003	1924	1825	3749	105
TROY	2366	1212	3578	100
MEAN	2145	1519	3664	
CV (%)	16	10	13	
LSD (0.05)	ns	346	ns	

Table 2.6. 26 Saskatoon Westerwolds Ryegrass 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Saskatoon , SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/29/00	CUT#2 Forage Yield (kg DM/ha) 09/06/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
AUBADE	7977	5431	1429	6860		100
NSCL 30	8046	5064	1615	6679		97
MEAN	8012	5247	1522	6769		
CV (%)	4	6	7	5		
LSD (0.05)	ns	ns	ns	ns		

Table 2.6. 27 Saskatoon Italian Ryegrass 2001

WFT ITALIAN RYEGRASS 2001 SASKATOON SK Area - 2

	2001 DM YIELD (kg ha^{-1})		
VARIETY	CUT 1 16 AUG 01	TOTAL	% OF MARIS LEDGER
MARIS LEDGER	1392	1392	100
FREDRIK	971	971	70
MEAN	1182	1182	
CV (%)	11.8	11.8	
LSD (0.05)	316	316	

2.7 Swift Current

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
1995	Alfalfa	96-98	2.7.1
1995	Fescue and Ryegrass	96-98	2.7.2
1995	Smooth Bromegrass	96-98	2.7.3
1995	Timothy, Orchardgrass and Meadow Foxtail	96-98	2.7.4
1996	Alfalfa	98-00	2. 7.5
1997	Alfalfa	98-00	2.7.6
1997	Bird's-foot Trefoil	98-00	2.7.7
1997	Cicer milk-vetch	98-00	2.7.8
1997	Crested Wheatgrass	98-00	2.7.9
1998	Alfalfa	99-00	2.7.10
1998	Red Clover	99-00	2.7.11
1998	Orchardgrass	99-00	2.7.12
1998	Timothy	99-00	2.7.13
1999	Westerwolds Ryegrass	99-00	2.7.14
1999	Alfalfa	2000	2.7.15
1999	Sainfoin	2000	2.7.16
1999	Clover	2000	2.7.17
1999	Bromegrass	2000-2001	2.7.18
1999	Timothy	2000-2001	2.7.19
1999	Kentucky Bluegrass	2000-2001	2.7.20
1999	Crested Wheatgrass	2000-2001	2.7.21
2000	Timothy	2001	2.7.22

Each year new forage variety trials are established at this site. When looking at the data for the trials established after 1998, or trials where there is less than three-years of data, please use caution in the interpretation of the results. In general, three years of data are required before there is sufficient confidence in the overall results for each trial.

Air temperatures were normal to above normal for much of the growing season (table A.3). In addition, the precipitation was about 70% of what would normally be expected for this region.

Rambler and Anchor yielded 108 and 104% of beaver, respectively when the data were averaged over all three years (table 2.7 1). For Rambler this is quite an improvement over its poor showing in the trials conducted in the Nipawin area. Beaver tended to out-yield all of the new experimental cultivars that were being tested in this trial including AC Grazeland Br (Lird-4) and Hornet (DS 907).

The two experimental fescue cultivars MCF 101 and PS 952 yielded 108 and 104% of Courtenay tall fescue in a study conducted from 1995 to 1998 (table 2.7 2). Courtenay and Ensign (meadow fescue) ranked about the same for forage biomass yield.

In a smooth Bromegrass trial established in 1995, experimental cultivar UGG 1801 yielded 102% of Carlton when the data were averaged over three years. At the same time, Radisson yielded 95% of Carlton in the same trial.

Tuukka and experimental cultivar UGG 1702 timothy yielded 117 and 113% of Climax (2.7.4). In a same study, experimental cultivar Haka and PS 951 orchardgrass yielded 103 and 102% of Kay, respectively.

Rangelander, beaver and Anchor tended to out-yield all of the new experimental cultivar lines in an alfalfa trial established in 1996 (table 2.7 5). Could this be evidence that some of the new experimental lines may be lacking in drought tolerance?

Anchor, Rangelander and Rambler yielded 118, 110 and 108 percent of beaver over three years from 1998 to 2000 (table 2.7 6).

AC Langille (UGG 1301) yielded 99% of Leo in a study conducted at Swift Current from 1998 to 2000 (table 2.7 7).

Experimental cicer milk-vetch cultivars Windsor (UGG 1901) and Oxley II (LRC-92) yielded 125 and 105% of the old standard cicer milk-vetch variety Oxley, respectively (table 2.7 8).

The new experimental crested wheatgrass lines S-9240 (AC Goliath) and CDII yielded 93 and 92%, respectively of the industry standard Kirk in a crested wheatgrass study conducted at Swift Current over a three-year period between 1998 and 2000 (table 2.7 9).

M121

IMPORTANT NOTE CONCERNING THE FOLLOWING PAGES

THE PAGES WHICH FOLLOW HAVE BEEN FILMED TWICE IN ORDER TO OBTAIN THE BEST REPRODUCTIVE QUALITY

USERS SHOULD CONSULT ALL THE PAGES REPRODUCED ON THE FICHE IN ORDER TO OBTAIN A COMPLETE READING OF THE TEXT.

REMARQUE IMPORTANTE CONCERNANT LES PAGES QUI SUIVENT

LES PAGES SUIVANTES ONT ÉTÉ REPRODUITES EN DOUBLE AFIN D'AMÉLIORER LA QUALITÉ DE REPRODUCTION

LES UTILISATEURS DOIVENT CONSULTER TOUTES LES PAGES REPRODUITES SUR LA FICHE AFIN D'OBTENIR LA LECTURE DU TEXTE INTÉGRAL

Micromedia
ProQuest

20 Victoria Street
Toronto, Ontario M5C 2N8
Tel.: (416) 362-5211
Toll Free: 1-800-387-2689
Fax: (416) 362-6161
Email: info@micromedia.on.ca

Table 2.7. 1 Swift Current Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 95404 Dryland
Swift Current, SK.

Variety	1996	1997	1998			3 year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 25/05/1998	CUT#2 Forage Yield (kg DM/ha) 18/08/1998	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Beaver
RAMBLER	4049	6052	576	618	1194	3765	108
ANCHOR	3875	5593	619	762	1381	3616	104
BEAVER	3793	5633	442	582	1024	3483	100
2T77	3236	5675	664	748	1411	3441	99
PS95-106	3674	5284	526	671	1197	3385	97
ZG 9419	3052	5232	777	825	1602	3295	95
ZG 9437	3445	5188	514	705	1219	3284	94
93-136	3461	4963	646	763	1409	3278	94
ABI 9136	3163	4891	816	922	1738	3264	94
LIRD-4	3366	5250	450	647	1098	3238	93
92-31	3034	5297	627	739	1367	3233	93
CW 2353	2834	5364	672	716	1387	3195	92
2T74	3340	5307	423	473	897	3181	91
DS 9313	3150	4930	600	726	1326	3135	90
ZG 9425	2941	5073	530	806	1336	3117	89
B44	2987	4866	583	718	1301	3051	88
BPR 366	3032	4843	576	612	1188	3021	87
DS 9315	2914	4587	728	749	1477	2993	86
DS 907	2971	4633	574	738	1312	2972	85
MAGNUM III WET	2700	4702	332	564	896	2766	79
3B21	2860	4520	413	495	909	2763	79
CW 2360	2713	4732	322	427	749	2731	78
922972	2597	4268	460	672	1132	2666	77
CW 2440	2532	4281	338	445	783	2532	73
MEAN	3155	5049	550	670	1222	3142	
C.V. (%)	16	28	54	32	41		
LSD(0.05)	696	416	ns	ns	ns		

Table 2.7. 1 Swift Current Alfalfa 1995

1995 Alfalfa Variety Adaptation Test
Test 95404 Dryland
Swift Current, SK.

Variety	1996	1997	1998			3 year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 25/05/1998	CUT#2 Forage Yield (kg DM/ha) 18/08/1998	Total Forage Yield (kg DM/ha)	Forage Yield (kg DM/ha)	% of Beaver
RAMBLER	4049	6052	576	618	1194	3765	108
ANCHOR	3875	5593	619	762	1381	3616	104
BEAVER	3793	5633	442	582	1024	3483	100
2T77	3236	5675	664	748	1411	3441	99
PS95-106	3674	5284	526	671	1197	3385	97
ZG 9419	3052	5232	777	825	1602	3295	95
ZG 9437	3445	5188	514	705	1219	3284	94
93-136	3461	4963	646	763	1409	3278	94
ABI 9136	3163	4891	816	922	1738	3264	94
LIRD-4	3366	5250	450	647	1098	3238	93
92-31	3034	5297	627	739	1367	3233	93
CW 2353	2834	5364	672	716	1387	3195	92
2T74	3340	5307	423	473	897	3181	91
DS 9313	3150	4930	600	726	1326	3135	90
ZG 9425	2941	5073	530	806	1336	3117	89
B44	2987	4866	583	718	1301	3051	88
BPR 366	3032	4843	576	612	1188	3021	87
DS 9315	2914	4587	728	749	1477	2993	86
DS 907	2971	4633	574	738	1312	2972	85
MAGNUM III WET	2700	4702	332	564	896	2766	79
3B21	2860	4520	413	495	909	2763	79
CW 2360	2713	4732	322	427	749	2731	78
922972	2597	4268	460	672	1132	2666	77
CW 2440	2532	4281	338	445	783	2532	73
MEAN	3155	5049	550	670	1222	3142	
C.V. (%)	16	28	54	32	41		
LSD(0.05)	696	416	ns	ns	ns		

Table 2.7. 2 Swift Current Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Swift Current, SK
Test 9573

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/16/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
MCF 101 tall fescue	2678	3735	1184	-	1184	2532	108
PS 952 creeping red fescue	3237	3362	699	-	699	2433	104
Courtenay tall fescue	2107	3879	1055	-	1055	2347	100
Ensign meadow fescue	3327	3002	686	-	686	2338	100
Retu tall fescue	1490	3689	1023	-	1023	2067	88
PS 953 creeping red fescue	2688	2442	1029	-	1029	2053	87
Boreale creeping red fescue	2846	1989	842	-	842	1892	81
UGG 1501 tall fescue	1334	3334	973	-	973	1880	80
UGG 1401 perennial ryegrass	-	-	909	-	909	909	39
Norlea perennial ryegrass	679	1120	804	-	804	868	37
MEAN	2378	2992	920	-	920	1932	
CV(%)	29	15	24	-	24		
LSD	977	592	277	-	277		

Table 2.7. 3 Swift Current Smooth Bromegrass 1995

1995 Smooth Bromegrass
Swift Current, Sk.
Test 95376 Dryland

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/25/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
UGG 1801	4738	3621	339	-	339	2899	102
Carlton	4477	3570	490	-	490	2846	100
Radisson	4236	3314	531	-	531	2694	95
Mean	4493	3501	453	-	453	2813	
C.V. (%)	14	24	29	-	29		
LSD (0.05)	940	1221	ns	-	ns		

Table 2.7. 2 Swift Current Fescue and Ryegrass 1995

1995 Fescue and Ryegrass
Swift Current, SK
Test 9573

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/16/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Courtenay
MCF 101 tall fescue	2678	3735	1184	-	1184	2532	108
PS 952 creeping red fescue	3237	3362	699	-	699	2433	104
Courtenay tall fescue	2407	3879	1055	-	1055	2347	100
Ensign meadow fescue	3327	3002	686	-	686	2338	100
Retu tall fescue	1490	3689	1023	-	1023	2067	88
PS 953 creeping red fescue	2688	2442	1029	-	1029	2053	87
Boreale creeping red fescue	2846	1989	842	-	842	1892	81
UGG 1501 tall fescue	1334	3334	973	-	973	1880	80
UGG 1401 perennial ryegrass	-	-	909	-	909	909	39
Norlea perennial ryegrass	679	1120	804	-	804	868	37
MEAN	2378	2992	920	-	920	1932	
CV(%)	29	15	24	-	24		
LSD	977	592	277	-	277		

Table 2.7. 3 Swift Current Smooth Bromegrass 1995

1995 Smooth Bromegrass
Swift Current, Sk.
Test 95376 Dryland

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/25/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
UGG 1801	4738	3621	339	-	339	2899	102
Carlton	4477	3570	490	-	490	2846	100
Radisson	4236	3314	531	-	531	2694	95
Mean	4493	3501	453	-	453	2813	
C.V. (%)	14	24	29	-	29		
LSD (0.05)	940	1221	ns	-	ns		

Table 2.7. 4 Swift Current Timothy Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchardgrass and Meadow Foxtail
Swift Current, SK
Test 95377 Dryland

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/16/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Tuuka timothy	3330	2238	1212	-	1212	2260	127
UGG 1702 timothy	3604	1953	985	-	985	2181	123
Climax timothy	2810	1840	1148	-	1148	1933	109
BOR 80102 timothy	3028	1693	1032	-	1032	1918	108
UGG1701 timothy	2685	1870	1097	-	1097	1884	106
Dan meadow foxtail	1757	2723	1160	-	1160	1880	106
Haka orchardgrass	1270	3179	1036	-	1036	1828	103
PS 951 orchardgrass	1101	3431	922	-	922	1818	102
Kay orchardgrass	633	3492	1211	-	1211	1779	100
Jay orchardgrass	640	3240	1207	-	1207	1696	95
Mountain meadow foxtail	1308	2229	1500	-	1500	1679	94
Roughrider orchardgrass	606	3059	858	-	858	1508	85
Mean	1898	2579	1114	-	1114	1864	
C.V. (%)	22	25	19	-	19		
LSD (0.05)	536	835	274	-	274		

Table 2.7. 5 Swift Current Alfalfa 1996

1996 Alfalfa Variety Adaptation Test
Swift Current, SK.
Re-sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/17/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
RANGELANDER	2401	4454	2707	1517	4224	3693	101
BEAVER	2529	4041	2593	1760	4354	3641	100
ANCHOR	2708	3969	2426	1807	4233	3637	100
PVN 1204	2317	3974	2610	1666	4276	3522	97
PVN 1206	2248	3883	2390	1681	4071	3401	93
PVN 1205	2235	3691	2539	1628	4167	3364	92
RAMBLER	2361	4389	2407	1340	3748	3499	96
92-28	2665	3487	2303	1485	3788	3313	91
CW 2227	2245	3998	1972	1430	3403	3215	88
94GG (Runner)	2090	3530	2350	1525	3875	3165	87
3B16 (Rainer)	2271	3235	2236	1645	3881	3129	86
PS 96-21	2301	3212	2515	1346	3860	3124	86
XAL 46	2210	3203	2260	1502	3762	3058	84
92-132 (Banquet)	2609	3084	2259	1473	3733	3142	86
CW 3304	2385	3213	2017	1455	3471	3023	83
93-110	2247	3213	1940	1397	3337	2932	81
CW 3313	2235	3282	1842	1416	3258	2925	80
SD 201	2011	4398	1833	687	2520	2976	82
MEAN	2337	3681	2289	1487	3776	3264	
CV (%)	18	16	22	19	19		
LSD (0.05)	ns	683	574	327	838		

Table 2.7. 4 Swift Current Timothy Orchardgrass and Meadow Foxtail 1995

1995 Timothy Orchardgrass and Meadow Foxtail
Swift Current, SK
Test 95377 Dryland

Variety	1996	1997	1998			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/16/98	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
Tuuka timothy	3330	2238	1212	-	1212	2260	127
UGG 1702 timothy	3604	1953	985	-	985	2181	123
Climax timothy	2810	1840	1148	-	1148	1933	109
BOR 80102 timothy	3028	1693	1032	-	1032	1918	108
UGG1701 timothy	2685	1870	1097	-	1097	1884	106
Dan meadow foxtail	1757	2723	1160	-	1160	1880	106
Haka orchardgrass	1270	3179	1036	-	1036	1828	103
PS 951 orchardgrass	1101	3431	922	-	922	1818	102
Kay orchardgrass	633	3492	1211	-	1211	1779	100
Jay orchardgrass	640	3240	1207	-	1207	1696	95
Mountain meadow foxtail	1308	2229	1500	-	1500	1679	94
Roughrider orchardgrass	606	3059	858	-	858	1508	85
Mean	1898	2579	1114	-	1114	1864	
C.V. (%)	22	25	19	-	19		
LSD (0.05)	536	835	274	-	274		

Table 2.7. 5 Swift Current Alfalfa 1996

1996 Alfalfa Variety Adaptation Test
Swift Current, SK.
Re-sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/17/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
RANGELANDER	2401	4454	2707	1517	4224	3693	101
BEAVER	2529	4041	2593	1760	4354	3641	100
ANCHOR	2708	3969	2426	1807	4233	3637	100
PVN 1204	2317	3974	2610	1666	4276	3522	97
PVN 1206	2248	3883	2390	1681	4071	3401	93
PVN 1205	2235	3691	2539	1628	4167	3364	92
RAMBLER	2361	4389	2407	1340	3748	3499	96
92-28	2665	3487	2303	1485	3788	3313	91
CW 2227	2245	3998	1972	1430	3403	3215	88
94GG (Runner)	2090	3530	2350	1525	3875	3165	87
3B16 (Rainer)	2271	3235	2236	1645	3881	3129	86
PS 96-21	2301	3212	2515	1346	3860	3124	86
XAL 46	2210	3203	2260	1502	3762	3058	84
92-132 (Banquet)	2609	3084	2259	1473	3733	3142	86
CW 3304	2385	3213	2017	1455	3471	3023	83
93-110	2247	3213	1940	1397	3337	2932	81
CW 3313	2235	3282	1842	1416	3258	2925	80
SD 201	2011	4398	1833	687	2520	2976	82
MEAN	2337	3681	2289	1487	3776	3264	
CV (%)	18	16	22	19	19		
LSD (0.05)	ns	683	574	327	838		

Table 2.7. 6 Swift Current Alfalfa 1997

1997 Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/17/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	2662	4027	2282	1598	3880	3523	118
RANGELANDER	2394	4097	2089	1264	3353	3281	110
RAMBLER	1876	4151	2379	1251	3630	3219	108
PVN 1207	2244	3263	2180	1547	3727	3078	104
PVN 1209	2285	3282	1945	1479	3423	2997	101
BEAVER	2001	3493	2043	1384	3427	2974	100
NS 3317	2269	3336	1915	1408	3323	2976	100
PVN 1208	2243	3295	1939	1377	3316	2951	99
SPUR	2258	3067	2092	1384	3475	2933	99
97 CRI	2088	3489	1959	1227	3187	2921	98
AB1 9141	2216	2973	2106	1330	3436	2875	97
QUATTRO HR	2447	2763	1945	1447	3392	2867	96
HAYGRAZER	1876	3008	1837	1309	3146	2677	90
PRO LEAF	1913	2624	2050	1323	3373	2637	89
X53V08	2073	2861	1664	1245	2910	2615	88
SF 9001	1799	2888	1874	1284	3159	2615	88
MEAN	2165	3289	2019	1366	3385	2946	
CV (%)	22	15	23	18	19		
LSD (0.05)	ns	577	537	275	753		

Table 2.7. 7 Swift Current Bird's-foot Trefoil 1997

Bird's-foot Trefoil Variety Adaptation Test
Swift Current, SK
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 27/06/2000	CUT#2 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Leo
Leo	1057	1858	488	-	488	1134	100
UGG 1301 (AC Langille)	1147	1753	459	-	459	1120	99
MEAN	1102	1805	474	-	474	1127	
CV (%)	24	14	15	-	15		
LSD (0.05)	ns	ns	ns	-	ns		

Table 2.7. 6 Swift Current Alfalfa 1997

1997 Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/17/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
ANCHOR	2662	4027	2282	1598	3880	3523	118
RANGELANDER	2394	4097	2089	1264	3353	3281	110
RAMBLER	1876	4151	2379	1251	3630	3219	108
PVN 1207	2244	3263	2180	1547	3727	3078	104
PVN 1209	2285	3282	1945	1479	3423	2997	101
BEAVER	2001	3493	2043	1384	3427	2974	100
NS 3317	2269	3336	1915	1408	3323	2976	100
PVN 1208	2243	3295	1939	1377	3316	2951	99
SPUR	2258	3067	2092	1384	3475	2933	99
97 CRI	2088	3489	1959	1227	3187	2921	98
AB1 9141	2216	2973	2106	1330	3436	2875	97
QUATTRO HR	2447	2763	1945	1447	3392	2867	96
HAYGRAZER	1876	3008	1837	1309	3146	2677	90
PRO LEAF	1913	2624	2050	1323	3373	2637	89
X53V08	2073	2861	1664	1245	2910	2615	88
SF 9001	1799	2888	1874	1284	3159	2615	88
MEAN	2165	3289	2019	1366	3385	2946	
CV (%)	22	15	23	18	19		
LSD (0.05)	ns	577	537	275	753		

Table 2.7. 7 Swift Current Bird's-foot Trefoil 1997

Bird's-foot Trefoil Variety Adaptation Test
Swift Current, SK
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 27/06/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Leo
Leo	1057	1858	488	-	488	1134	100
UGG 1301 (AC Langille)	1147	1753	459	-	459	1120	99
MEAN	1102	1805	474	-	474	1127	
CV (%)	24	14	15	-	15		
LSD (0.05)	ns	ns	ns	-	ns		

Table 2.7. 8 Swift Current Cicer Milk-Vetch

Cicer Milk-Vetch Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 27/06/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Oxley
UGG 1901	488	1755	565		565	936	125
LRC 92	428	1501	419		419	783	105
LRC 91	443	1543	346		346	777	104
OXLEY	445	1532	264		264	747	100
MEAN	451	1583	398		398	811	
CV (%)	29	27	40		40		
LSD (0.05)	ns	ns	197		197		

Table 2.7. 9 Swift Current Crested Wheatgrass 1997

Crested Wheatgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
KIRK	4879	4346	1724	-	1724	3649	100
S-9240	4385	4124	1640	-	1640	3383	93
CD 11	4644	3898	1501	-	1501	3348	92
MEAN	4636	4123	1621	-	1621	3460	
CV (%)	14	14	14	-	14		
LSD (0.05)	ns	ns	ns	-	ns		

Table 2.7. 8 Swift Current Cicer Milk-Vetch

Cicer Milk-Vetch Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 27/06/2000	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Oxley
UGG 1901	488	1755	565		565	936	125
LRC 92	428	1501	419		419	783	105
LRC 91	443	1543	346		346	777	104
OXLEY	445	1532	264		264	747	100
MEAN	451	1583	398		398	811	
CV (%)	29	27	40		40		
LSD (0.05)	ns	ns	197		197		

Table 2.7. 9 Swift Current Crested Wheatgrass 1997

Crested Wheatgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1997
Dryland

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
KIRK	4879	4346	1724		1724	3649	100
S-9240	4385	4124	1640	-	1640	3383	93
CD 11	4644	3898	1501	-	1501	3348	92
MEAN	4636	4123	1621	-	1621	3460	
CV (%)	14	14	14	-	14		
LSD (0.05)	ns	ns	ns	-	ns		

Table 2.7. 10 Swift Current Alfalfa 1998

Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/16/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
RAMBLER	6123	3216	1258	4474	5299	112
ZG 9721	5927	3187	1191	4378	5152	109
ANCHOR	5716	2858	1279	4137	4926	104
53Q60	5000	3207	1363	4570	4785	101
CW 5440	5249	3001	1252	4253	4751	100
ZG 9711C	5348	2966	1182	4148	4748	100
BEAVER	5462	2776	1242	4018	4740	100
SPREDOR GT	5267	2749	1290	4039	4653	98
5301	5020	2609	1293	3902	4461	94
WL 232HQ	4710	2963	1149	4112	4411	93
CW 5302	4653	2785	1370	4155	4404	93
R801	5153	2567	1006	3573	4363	92
4321	4297	2673	1322	3995	4146	87
MEAN	5225	2889	1246	4135	4680	
CV (%)	10	19	22	17		
LSD (0.05)	757	ns	ns	993		

Table 2.7. 11 Swift Current Clover 1998

Red Clover Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
ALTASWEDE	4996	444	-	444	2720	100
WILDCAT	3436	588	-	588	2012	74
GORBY	3404	232	-	232	1818	67
MEAN	3945	421	-	421	2183	
CV (%)	9	35	-	35		
LSD (0.05)	630	257	-	257		

Table 2.7. 10 Swift Current Alfalfa 1998

Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/26/00	CUT#2 Forage Yield (kg DM/ha) 08/16/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
RAMBLER	6123	3216	1258	4474	5299	112
ZG 9721	5927	3187	1191	4378	5152	109
ANCHOR	5716	2858	1279	4137	4926	104
53Q60	5000	3207	1363	4570	4785	101
CW 5440	5249	3001	1252	4253	4751	100
ZG 9711C	5348	2966	1182	4148	4748	100
BEAVER	5462	2776	1242	4018	4740	100
SPREDOR GT	5267	2749	1290	4039	4653	98
5301	5020	2609	1293	3902	4461	94
WL 232HQ	4710	2963	1149	4112	4411	93
CW 5302	4653	2785	1370	4155	4404	93
R801	5153	2567	1006	3573	4363	92
4321	4297	2673	1322	3995	4146	87
MEAN	5225	2889	1246	4135	4680	
CV (%)	10	19	22	17		
LSD (0.05)	757	ns	ns	993		

Table 2.7. 11 Swift Current Clover 1998

Red Clover Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
ALTASWEDE	4996	444	[illegible]	444	2720	100
WILDCAT	3436	588	-	588	2012	74
GORBY	3404	232	-	232	1818	67
MEAN	3945	421	-	421	2183	
CV (%)	9	35	-	35		
LSD (0.05)	630	257	-	257		

Table 2.7. 12 Swift Current Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
KAY	3886	1022	[illegible]	1022	2454	100
OG96-3	4041	749	-	749	2395	98
OG96-2	3270	721	-	721	1996	81
OG96-1	3749	772	-	772	2261	92
OFI 93L	2368	637	-	637	1502	61
MEAN	4363	780	-	780	2572	
CV (%)	13	14	-	14		
LSD (0.05)	717	166	-	166		

Table 2.7. 13 Swift Current Timothy 1998

Timothy Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	3795	632		632	2213	100
JOLIETTE	3143	866		866	2004	91
BOR 94301	3242	724		724	1983	90
BOR 72002	2962	885		885	1924	87
MEAN	3286	777		777	2031	
CV (%)	16	19		19		
LSD (0.05)	819	238		238		

Table 2.7. 12 Swift Current Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
KAY	3886	1022		1022	2454	100
OG96-3	4041	749	-	749	2395	98
OG96-2	3270	721	-	721	1996	81
OG96-1	3749	772	-	772	2261	92
OFI 93L	2368	637	-	637	1502	61
MEAN	4363	780	-	780	2572	
CV (%)	13	14	-	14		
LSD (0.05)	717	166	-	166		

Table 2.7. 13 Swift Current Timothy 1998

Timothy Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/27/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	3795	632		632	2213	100
JOLIETTE	3143	866		866	2004	91
BOR 94301	3242	724		724	1983	90
BOR 72002	2962	885		885	1924	87
MEAN	3286	777		777	2031	
CV (%)	16	19		19		
LSD (0.05)	819	238		238		

Table 2.7. 14 Swift Current Westerwolds 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999 and 2000
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 08/15/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
AUBADE	4187	2430	[illegible]	2430	3308	100
NSCL 30	2902	2375	-	2375	2638	100
MEAN	3636	2402	-	2402	3019	
CV (%)	19	12	-	12		
LSD (0.05)	ns	ns	-	ns		

Table 2.7. 15 Swift Current Alfalfa 1999

Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) 06/21/00	CUT#2 Forage Yield (kg DM/ha) 08/21/00	Total Forage Yield (kg DM/ha)	% of Beaver
3030	3221	2493	5715	108
CW 6408	3177	2511	5688	107
DS 9929	3309	2357	5666	107
DS 9927	3170	2367	5537	104
DS 9925	3057	2480	5537	104
C304	3007	2477	5485	103
BEAVER	2997	2304	5301	100
RAMBLER	3172	2056	5228	99
DS 9928	2972	2217	5190	98
SL 9901	2922	2224	5146	97
C227	2826	2263	5089	96
ZG 9831	2797	2268	5065	96
ANCHOR	2919	2134	5053	95
CW 4223	2721	2248	4969	94
SI 9902	2775	2103	4878	92
DS 9924	2889	1966	4855	92
SL 9900	2697	2139	4836	91
2065 MF	2551	2111	4662	88
GIBRALTAR	2513	2074	4587	87
R922	2490	2075	4565	86
DS 9923	2532	2019	4551	86
R923	2505	2023	4529	85
GENEVA	2399	2007	4406	83
4241	2461	1912	4373	82
4321	2673	1322	3995	87
MEAN	2837	2201	5038	
CV (%)	16	15	15	
LSD (0.05)	642	474	1049	

Table 2.7. 14 Swift Current Westerwolds 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999 and 2000
Dryland

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 08/15/00	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
AUBADE	4187	2430	-	2430	3308	100
NSCL 30	2902	2375	-	2375	2638	100
MEAN	3636	2402	-	2402	3019	
CV (%)	19	12	-	12		
LSD (0.05)	ns	ns	-	ns		

Table 2.7. 15 Swift Current Alfalfa 1999

Alfalfa Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) 06/21/00	CUT#2 Forage Yield (kg DM/ha) 08/21/00	Total Forage Yield (kg DM/ha)	% of Beaver
3030	3221	2493	5715	108
CW 6408	3177	2511	5688	107
DS 9929	3309	2357	5666	107
DS 9927	3170	2367	5537	104
DS 9925	3057	2480	5537	104
C304	3007	2477	5485	103
BEAVER	2997	2304	5301	100
RAMBLER	3172	2056	5228	99
DS 9928	2972	2217	5190	98
SL 9901	2922	2224	5146	97
C227	2826	2263	5089	96
ZG 9831	2797	2268	5065	96
ANCHOR	2919	2134	5053	95
CW 4223	2721	2248	4969	94
SI 9902	2775	2103	4878	92
DS 9924	2889	1966	4855	92
SL 9900	2697	2139	4836	91
2065 MF	2551	2111	4662	88
GIBRALTAR	2513	2074	4587	87
R922	2490	2075	4565	86
DS 9923	2532	2019	4551	86
R923	2505	2023	4529	85
GENEVA	2399	2007	4406	83
4241	2461	1912	4373	82
4321	2673	1322	3995	87
MEAN	2837	2201	5038	
CV (%)	16	15	15	
LSD (0.05)	642	474	1049	

Table 2.7. 16 Swift Current Sainfoin 1999

Sainfoin Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000 CUT#1 Forage Yield (kg DM/ha) June 27/2000	CUT#2 Forage Yield (kg DM/ha) July 28/2000	Total Forage Yield (kg DM/ha)	% of Nova
MELROSE	2201	1416	3617	105
NOVA	2111	1348	3459	100
SC 38401	2037	1303	3340	97
WY-PX2-94	1805	1097	2902	84
LARAMIE	1541	1005	2546	74
MEAN	1939	1234	3173	
CV (%)	14	16	13	
LSD (0.05)	425	295	646	

Table 2.7. 17 Swift Current Red Clover 1999

Red Clover Variety Adaptation Test

Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
AURORA	4279	7790	496	496	2388	4143	142
BOR 2222	3973	7584	439	439	2206	4012	138
NSCL 29	4264	7844	116	116	2190	3980	137
ALTASWEDE	2779	5446	381	381	1580	2913	100
VIVI (RED)	3142	5476	169	169	1656	2823	97
MEAN	3687	6828	320	320	2004	3574	
CV (%)	10	13	56	56			
LSD (0.05)	543	1363	275	275			

Table 2.7. 16 Swift Current Sainfoin 1999

Sainfoin Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000			
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	CUT#2 Forage Yield (kg DM/ha) July 28/2000	Total Forage Yield (kg DM/ha)	% of Nova
MELROSE	2201	1416	3617	105
NOVA	2111	1348	3459	100
SC 38401	2037	1303	3340	97
WY-PX2-94	1805	1097	2902	84
LARAMIE	1541	1005	2546	74
MEAN	1939	1234	3173	
CV (%)	14	16	13	
LSD (0.05)	425	295	646	

Table 2.7. 17 Swift Current Red Clover 1999

Red Clover Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
AURORA	4279	7790	496	496	2388	4143	142
BOR 2222	3973	7584	439	439	2206	4012	138
NSCL 29	4264	7844	116	116	2190	3980	137
ALTASWEDE	2779	5446	381	381	1580	2913	100
VIVI (RED)	3142	5476	169	169	1656	2823	97
MEAN	3687	6828	320	320	2004	3574	
CV (%)	10	13	56	56			
LSD (0.05)	543	1363	275	275			

Table 2.7. 18 Swift Current Bromegrass 1998

Bromegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
FLEET	3972	4803	508	508	2240	2656	126
MB-A	3340	4338	441	441	1891	2389	113
S-9356	3658	4137	349	349	2004	2243	106
LOBF9201	3506	4107	263	263	1884	2185	103
CARLTON	3492	4029	195	195	1843	2112	100
LOBF9202	3158	3684	223	223	1691	1954	93
MEAN	3521	4183	330	330	1925	2256	
CV (%)	11	10	19	19			
LSD (0.05)	558	645	96	96			

Table 2.7. 19 Swift Current Timothy 1998

Timothy Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	3457	5972	1462	-	1462	2459	3717	100
GPT 18906	2039	4255	1955	-	1955	1997	3105	84
GPT 18905	2549	4099	1808	-	1808	2179	2954	79
MEAN	2682	4776	1742	-	1742	2212	3259	
CV (%)	35	18	16	-	16			
LSD (0.05)	1623	1504	483	-	483			

Table 2.7. 18 Swift Current Bromegrass 1998

Bromegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
FLEET	3972	4803	508	508	2240	2656	126
MB-A	3340	4338	441	441	1891	2389	113
S-9356	3658	4137	349	349	2004	2243	106
LOBF9201	3506	4107	263	263	1884	2185	103
CARLTON	3492	4029	195	195	1843	2112	100
LOBF9202	3158	3684	223	223	1691	1954	93
MEAN	3521	4183	330	330	1925	2256	
CV (%)	11	10	19	19			
LSD (0.05)	558	645	96	96			

Table 2.7. 19 Swift Current Timothy 1998

Timothy Variety Adaptation Test
Swift Current, SK.
Sown May 1998
Dryland

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
CLIMAX	3457	5972	1462	-	1462	2459	3717	100
GPT 18906	2039	4255	1955	-	1955	1997	3105	84
GPT 18905	2549	4099	1808	-	1808	2179	2954	79
MEAN	2682	4776	1742	-	1742	2212	3259	
CV (%)	35	18	16	-	16			
LSD (0.05)	1623	1504	483	-	483			

Table 2.7. 20 Swift Current Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Troy
TROY	2177	3844	2646	2646	2412	3245	100
KVER 003	414	1394	1238	1238	826	1316	41
MEAN	1295	2619	1942	1942	1619	2281	
CV (%)	58	40	23	23			
LSD (0.05)	1684	2368	1014	1014			

F4

Table 2.7. 21 Swift Current Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 12/2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
KIRK	3422	3982	547	547	1984	2264	100
VAVILOV	3047	3956	507	507	1777	2231	99
DOUGLAS	2728	2980	87	87	1408	1533	68
MEAN	3065	3639	380	380	1723	2010	
CV (%)	12	12	17	17			
LSD (0.05)	615	752	110	110			

Table 2.7. 20 Swift Current Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) July 3/2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Troy
TROY	2177	3844	2646	2646	2412	3245	100
KVER 003	414	1394	1238	1238	826	1316	41
MEAN	1295	2619	1942	1942	1619	2281	
CV (%)	58	40	23	23			
LSD (0.05)	1684	2368	1014	1014			

Table 2.7. 21 Swift Current Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Swift Current, SK.
Sown May 1999
Dryland

Variety	2000		2001		2 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
	June 28/2000		July 12/2001	-			
KIRK	3422	3982	547	547	1984	2264	100
VAVILOV	3047	3956	507	507	1777	2231	99
DOUGLAS	2728	2980	87	87	1408	1533	68
MEAN	3065	3639	380	380	1723	2010	
CV (%)	12	12	17	17			
LSD (0.05)	615	752	110	110			

Table 2.7. 22 Swift Current Timothy 2000

WFT TIMOTHY 2000 SWIFT CURRENT SK Area - 1

	2001 DM YIELD (kg ha^{-1})	
VARIETY	CUT 1 03 JUL 01	% OF CLIMAX
CLIMAX	2735	100
BOR 94374	2653	97
BOR 94372	2585	95
PCQX-39	2247	82
PBQX-1	1936	71
MOTIM	1906	70
MEAN	2344	
CV (%)	17.1	
LSD (0.05)	603	

Table 2.7. 22 Swift Current Timothy 2000

WFT TIMOTHY 2000 SWIFT CURRENT SK Area - 1

	2001 DM YIELD (kg ha^{-1})	
VARIETY	CUT 1 03 JUL 01	% OF CLIMAX
CLIMAX	2735	100
BOR 94374	2653	97
BOR 94372	2585	95
PCQX-39	2247	82
PBQX-1	1936	71
MOTIM	1906	70
MEAN	2344	
CV (%)	17.1	
LSD (0.05)	603	

2.8 Outlook Irrigation

Yield Table Index

Year of Seeding	Species	Years of Data Collection	Table
1995	Alfalfa	96-98	2.8.1
1996	Alfalfa	97-99	2.8.2
1997	Alfalfa	98-00	2.8.3
1998	Alfalfa	99-01	2.8.4
1999	Alfalfa	2000-01	2.8.5
2000	Alfalfa	2001	2.8.6
1995	Fescue and Ryegrass	96-98	2.8.7
1995	Smooth Brome	96-98	2.8.8
1995	Timothy, Orchardgrass and Meadow Foxtail	96-98	2.8.9
1998	Red Clover	99-01	2.8.10
1999	Red Clover	2000-01	2.8.11
1996	Bird's-foot Trefoil	97-00	2.8.12
1996	Cicer Milk-Vetch	98-00	2.8.13
1997	Crested Wheatgrass	99-01	2.8.14
1999	Crested Wheatgrass	2000-01	2.8.15
1996	Timothy	97-99	2.8.16
1998	Orchardgrass	99-01	2.8.17
1998	Westerwolds Ryegrass	99-00	2.8.18
1998	Timothy	99-01	2.8.19
1999	Timothy	2000-01	2.8.20
2000	Timothy	2001	2.8.21
1999	Bromegrass	2000-01	2.8.22
1999	Kentucky Bluegrass	2000-01	2.8.23

Each year new forage variety trials are established at this site. When looking at the data for trials established after 1998, or trials with less than three years of data, please use caution in the interpretation of the results. In general, three years of data are required before there is sufficient confidence in the overall results for each trial.

Air temperatures were normal to slightly above normal for most of the growing season (table A.4). Like most of Saskatchewan, precipitation in the Outlook area was well below the 30-year average except in July when the precipitation was 180% of normal. In addition, these forage plots received more than 350mm of irrigation from June to the end of September.

The Outlook, site is an irrigated site and all the cultivar data presented herein has been collected under an irrigation regime.

The registered forage varieties Hornet (DS 907), AC Grazeland Br (LIRD-4), Anchor, Stockwell (DS9313), Atomic (DS9315) and WL 324 (92-31) yielded 110, 109, 107, 106, 105, 104 and 102% of beaver when the data was pooled over three years from 1996 to 1998, respectively (table 2.8.1). Many of these new lines seemed to perform better under irrigation than under dryland conditions as is evident from the much lower ranking under dryland conditions. **Anchor is one of the few alfalfa varieties that has had constantly high yields each year relative to beaver in almost all the alfalfa trials presented in this document.**

Of the 14 experimental alfalfa cultivars established in 1996, 11 exhibited yield potential higher than beaver under the irrigated condition between 1997 and 1999 (table 2.8.2). Of these new forage cultivars, TMF 421 (CW 2227) and AgriMaster (PS 96-21) yielded 105 and 104% of beaver respectively. Barrier and Rambler yielded 99 and 86% of beaver respectively.

Proleaf yielded 102% of beaver (table 2.8.3). True North (ABI 9141), Quattro HR and Barrier yielded 100% of beaver. Rambler was way at the bottom of the pack in this trial and only yielded 85% of beaver.

Of 11 new experimental alfalfa cultivars tested from 1998 to 2001, 8 showed yield potential equal to or greater than beaver. 53Q60 and Barrier yielded 105 and 104% of beaver, respectively (table 4.8.4).

Courtenay tall fescue yielded 105, 113 and 114% of experimental cultivars MCF 101, UGG 1501 and Retu respectively (table 2.8.7). Experimental meadow fescue line PS 952 yielded 120% of experimental meadow fescue line Ensign. **This is one of the few perennial ryegrass trials sown in Saskatchewan in 1995, where perennial ryegrass survived for the full duration of the study. Norlea and UGG 1401perennial ryegrass yielded 56 and 15%, respectively of Courtenay tall fescue.**

Experimental lines Radisson and UGG 1801 smooth Bromegrass yielded 98 and 92% of Carlton smooth brome respectively (table 2.8.8).

Experimental timothy cultivar Tuukka yielded 84% of Climax (table 2.8.9). Dan meadow foxtail yield 113% of mountain meadow foxtail. Kay orchardgrass tended to out-yield Roughrider, Haka, PS 951 and Jay orchardgrass cultivars, but yield only 65% of Climax.

Wildcat and Gorby red clover yielded 114 and 109% of Altaswede, respectively (table 2.8.10).

Under irrigation, AC Langille (UGG 1301) yielded 109% of Leo bird's-foot trefoil (table 2.8.12).

Unlike most of the experimental trials sown in 1996 to study new Cicer Milk-Vetch cultivars in Saskatchewan, the standard Cicer Milk-Vetch variety Oxley, yielded similar to Windsor (UGG

1901). More importantly, Oxley actual out performed Oxley II (LRC 92-1) and LRC 93-1 by 102 and 106% respectively (table 2.8.13). This is very surprising since these three experimental lines are expected to replace Oxley in the very near future.

Goliath (S-9240) crested wheatgrass yielded 108% of Kirk (table 2.8 14), while CDII yielded only 92% of Kirk over the three year period from 1999 to 2001.

The newly registered timothy lines AC Alliance and Grindstad (UGG 1703) yielded 109 and 106% of timothy respectively (table 2.8 16). In this trial, all experimental lines expressed the potential to consistently out-yield Climax.

Kay orchardgrass tended to yield higher than all other experimental orchardgrass cultivars tested from 1998 to 2001 at Outlook (table 2.8 17).

New experimental line Joliette timothy yielded 107% of Climax timothy (table 2.8 19). Joliette has since been registered in Canada.

Table 2.8. 1 Outlook Alfalfa 1995

1995 WF Alfalfa
OUTLOOK,

	1998					
ENTRY	14-Jun CUT 1 kg/ha	08-Jul CUT 2 kg/ha	16-Aug CUT 3 kg/ha	TOTAL kg/ha	1996-98 AVERAG kg/ha	% of
DS907	5202	5136	2818	13156	11425	110
LIRD-4	5923	4706	2828	13456	11303	109
BPR366	5738	5287	2976	14000	11179	108
ANCHOR	5501	4726	2410	12637	11051	107
PS95-106	5069	5015	2646	12729	11027	106
DS9313	5547	5049	2861	13455	10956	106
922972	5781	4725	2447	12954	10872	105
DS9315	5307	4822	2562	12692	10842	105
CW2440	5006	3998	2348	11351	10829	105
ABI9136	4991	4514	2428	11933	10785	104
CW2353	5159	5209	2730	13098	10588	102
92-31	4715	4766	2616	12097	10548	102
CW2360	5581	4469	2575	12624	10476	101
BEAVER	5013	4555	2039	11607	10359	100
2T74	5184	3934	2078	11196	10355	100
ZG9419	5143	4293	2261	11697	10263	99
MAGNUM3W	4922	4709	2555	12186	10178	98
ZG9437	4919	4814	2275	12009	10015	97
B44	4906	4704	2391	12001	9993	96
3B21	3786	4805	2669	11259	9816	95
93-136	4693	4500	2544	11738	9811	95
2T77	4396	4840	2494	11730	9717	94
ZG9425	5236	4473	1923	11632	9281	90
RAMBLER	3314	4304	1193	8812	7487	72
Mean	5043	4681	2444	12169	10381	
CV(%)	16	12	13	9	8	
LSD	-	-	523	1729	1349	

Table 2.8. 2 Outlook Alfalfa 1996

WFT ALFALFA 1996 OUTLOOK SK AREA-IRR

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 05-Jul-99	CUT 2 25-Aug-99	TOTAL	3 Year Average TOTAL	% OF BEAVER
CW3304	12165	14965	5871	6143	12014	13048	110
XAL46	12406	14536	5940	5908	11848	12930	109
CW3313	11123	14458	5661	6408	12069	12550	106
93-110	11062	14619	5843	5971	11813	12498	106
CW2227	11345	13968	5689	6041	11730	12348	105
PS96-21	11463	13762	5786	5939	11726	12317	104
92-28	11771	13284	5794	6025	11820	12292	104
PVN1204	11244	13672	5512	5986	11498	12138	103
3B16 (Rainer)	10590	14016	5911	5822	11733	12113	103
PVN1205	11167	13341	5605	6041	11646	12051	102
PVN1206	10496	14218	5371	5736	11107	11940	101
BEAVER	10446	13275	5677	6033	11710	11810	100
BARRIER	10101	13619	5266	6033	11299	11673	99
92-132 (Banquet)	10795	12453	5500	6096	11595	11614	98
94GG (Runner)	9619	12075	4572	5807	10378	10691	91
RAMBLER	8589	11197	4644	5924	10568	10118	86
SD201	8028	8789	4200	5080	9280	8699	74
MEAN	10730	13308	5461	5941	11402	11814	
CV (%)	10	10	10	11	8	7	
LSD (0.05)	1470	1803	751	-	1252	1132	

Table 2.8. 1 Outlook Alfalfa 1995

1995 WF Alfalfa
OUTLOOK,

	1998					
ENTRY	14-Jun CUT 1 kg/ha	08-Jul CUT 2 kg/ha	16-Aug CUT 3 kg/ha	TOTAL kg/ha	1996-98 AVERAG kg/ha	% of
DS907	5202	5136	2818	13156	11425	110
LIRD-4	5923	4706	2828	13456	11303	109
BPR366	5738	5287	2976	14000	11179	108
ANCHOR	5501	4726	2410	12637	11051	107
PS95-106	5069	5015	2646	12729	11027	106
DS9313	5547	5049	2861	13455	10956	106
922972	5781	4725	2447	12954	10872	105
DS9315	5307	4822	2562	12692	10842	105
CW2440	5006	3998	2348	11351	10829	105
ABI9136	4991	4514	2428	11933	10785	104
CW2353	5159	5209	2730	13098	10588	102
92-31	4715	4766	2616	12097	10548	102
CW2360	5581	4469	2575	12624	10476	101
BEAVER	5013	4555	2039	11607	10359	100
2T74	5184	3934	2078	11196	10355	100
ZG9419	5143	4293	2261	11697	10263	99
MAGNUM3W	4922	4709	2555	12186	10178	98
ZG9437	4919	4814	2275	12009	10015	97
B44	4906	4704	2391	12001	9993	96
3B21	3786	4805	2669	11259	9816	95
93-136	4693	4500	2544	11738	9811	95
2T77	4396	4840	2494	11730	9717	94
ZG9425	5236	4473	1923	11632	9281	90
RAMBLER	3314	4304	1193	8812	7487	72
Mean	**5043**	**4681**	**2444**	**12169**	**10381**	
CV(%)	16	12	13	9	8	
LSD	-	-	523	1729	1349	

Table 2.8. 2 Outlook Alfalfa 1996

WFT ALFALFA 1996 OUTLOOK SK AREA-IRR

VARIETY	1997 Total Yield	1998 Total Yield	1999 DM YIELD KG/HA CUT 1 05-Jul-99	CUT 2 25-Aug-99	TOTAL	3 Year Average TOTAL	% OF BEAVER
CW3304	12165	14965	5871	6143	12014	13048	110
XAL46	12406	14536	5940	5908	11848	12930	109
CW3313	11123	14458	5661	6408	12069	12550	106
93-110	11062	14619	5843	5971	11813	12498	106
CW2227	11345	13968	5689	6041	11730	12348	105
PS96-21	11463	13762	5786	5939	11726	12317	104
92-28	11771	13284	5794	6025	11820	12292	104
PVN1204	11244	13672	5512	5986	11498	12138	103
3B16 (Rainer)	10590	14016	5911	5822	11733	12113	103
PVN1205	11167	13341	5605	6041	11646	12051	102
PVN1206	10496	14218	5371	5736	11107	11940	101
BEAVER	10446	13275	5677	6033	11710	11810	100
BARRIER	10101	13619	5266	6033	11299	11673	99
92-132 (Banquet)	10795	12453	5500	6096	11595	11614	98
94GG (Runner)	9619	12075	4572	5807	10378	10691	91
RAMBLER	8589	11197	4644	5924	10568	10118	86
SD201	8028	8789	4200	5080	9280	8699	74
MEAN	10730	13308	5461	5941	11402	11814	
CV (%)	10	10	10	11	8	7	
LSD (0.05)	1470	1803	751	-	1252	1132	

Table 2.8. 3 Outlook Alfalfa 1997

Alfalfa Variety Adaptation Test
Outlook, SK.
Sown May 1997

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/20/00	CUT#2 Forage Yield (kg DM/ha) 08/09/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
SF 9001	17045	15664	7410	6331	13742	15484	109
PVN 1209	15235	15280	7856	6904	14760	15092	106
PROLEAF	15254	14400	6236	7566	13802	14485	102
PVN 1208	16170	13782	7328	6072	13400	14451	102
ABI 9141	15632	13386	7381	6368	13749	14256	100
QUATTRO HR	15214	14438	6867	6217	13083	14245	100
BEAVER	14523	12967	6721	8489	15211	14234	100
BARRIER	-	14788	7746	5933	13678	14233	100
PVN 1207	14809	14230	6844	6109	12953	13997	98
X53V08	14314	13106	7990	6458	14447	13956	98
NS 3317	16000	12723	6298	6598	12896	13873	97
HAYGRAZER	14778	12893	6644	6357	13000	13557	95
SPUR	13947	13764	6121	6721	12842	13518	95
97CR1	14140	12661	6117	6565	12682	13161	92
RAMBLER	12404	13237	5444	5212	10655	12099	85
MEAN	14945	13821	6867	6527	13393	14053	
CV (%)	8	8	18	23	13		
LSD (0.05)	1769	1611	1719	2179	2514		

Table 2.8. 4 Outlook Alfalfa 1998

Alfalfa Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001				3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 20/2001	CUT#2 Forage Yield (kg DM/ha) July 26/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
4321	9485	16124	6380	13209	9633	6858	4621	21111	8361	16815	111
5301	8608	14997	5964	12569	9564	6740	4593	20896	8236	16154	106
ZG 9711C	7179	12915	6542	13062	9406	7959	4738	22103	7604	16027	106
53Q60	8621	14924	6536	13061	8799	6061	5204	20064	7616	16016	105
CW 5302	8206	13736	6796	14283	7368	7370	4812	19549	7221	15856	104
BARRIER	8345	14360	6678	13243	8704	6662	4289	19656	7402	15753	104
CW 5440	7636	13640	6089	12362	7960	7692	4719	20371	7230	15458	102
SPREDOR GT	6662	13367	6258	12820	8699	6159	4948	19806	7093	15331	101
WL 232HQ	7822	12959	5919	12134	8675	7288	4635	20597	7680	15230	100
BEAVER	8288	14202	5158	11079	8025	8543	3707	20274	7703	15185	100
ZG 9721	6752	10929	6226	13065	9706	6475	4758	20938	7512	14977	99
R801	7831	13553	6093	12509	8329	6425	4075	18828	7058	14963	99
RAMBLER	7903	13510	5014	10583	7056	7822	3090	17968	7072	14020	92
ANCHOR	8662	14659	5427	9610	7725	5372	4325	17421	7688	13897	92
MEAN	8000	13848	6077	12399	8546	6959	4465	19970	7534	15406	
CV (%)	13	8	14	15	16	21	12	12			
LSD (0.05)	1456	1630	1185	2587	1894	2100	787	3493			

Table 2.8. 3 Outlook Alfalfa 1997

Alfalfa Variety Adaptation Test
Outlook, SK.
Sown May 1997

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/20/00	CUT#2 Forage Yield (kg DM/ha) 08/09/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
SF 9001	17045	15664	7410	6331	13742	15484	109
PVN 1209	15235	15280	7856	6904	14760	15092	106
PROLEAF	15254	14400	6236	7566	13802	14485	102
PVN 1208	16170	13782	7328	6072	13400	14451	102
ABI 9141	15632	13386	7381	6368	13749	14256	100
QUATTRO HR	15214	14438	6867	6217	13083	14245	100
BEAVER	14523	12967	6721	8489	15210	14233	100
BARRIER	-	14788	7746	5933	13678	14233	100
PVN 1207	14809	14230	6844	6109	12953	13997	98
X53V08	14314	13106	7990	6458	14447	13956	98
NS 3317	16000	12723	6298	6598	12896	13873	97
HAYGRAZER	14778	12893	6644	6357	13000	13557	95
SPUR	13947	13764	6121	6721	12842	13518	95
97CR1	14140	12661	6117	6565	12682	13161	92
RAMBLER	12404	13237	5444	5212	10655	12099	85
MEAN	14945	13821	6867	6527	13393	14053	
CV (%)	8	8	18	23	13		
LSD (0.05)	1769	1611	1719	2179	2514		

Table 2.8. 4 Outlook Alfalfa 1998

Alfalfa Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001				3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 20/2001	CUT#2 Forage Yield (kg DM/ha) July 26/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
4321	9485	16124	6380	13209	9633	6858	4621	21111	8361	16815	111
5301	8608	14997	5964	12569	9564	6740	4593	20896	8236	16154	106
ZG 9711C	7179	12915	6542	13062	9406	7959	4738	22103	7604	16027	106
53Q60	8621	14924	6536	13061	8799	6061	5204	20064	7616	16016	105
CW 5302	8206	13736	6796	14283	7368	7370	4812	19549	7221	15856	104
BARRIER	8345	14360	6678	13243	8704	6662	4289	19656	7402	15753	104
CW 5440	7636	13640	6089	12362	7960	7692	4719	20371	7230	15458	102
SPREDOR GT	6662	13367	6258	12820	8699	6159	4948	19806	7093	15331	101
WL 232HQ	7822	12959	5919	12134	8675	7288	4635	20597	7680	15230	100
BEAVER	8288	14202	5158	11079	8025	8543	3707	20274	7703	15185	100
ZG 9721	6752	10929	6226	13065	9706	6475	4758	20938	7512	14977	99
R801	7831	13553	6093	12509	8329	6425	4075	18828	7058	14963	99
RAMBLER	7903	13510	5014	10583	7056	7822	3090	17968	7072	14020	92
ANCHOR	8662	14659	5427	9610	7725	5372	4325	17421	7688	13897	92
MEAN	8000	13848	6077	12399	8546	6959	4465	19970	7534	15406	
CV (%)	13	8	14	15	16	21	12	12			
LSD (0.05)	1456	1630	1185	2587	1894	2100	787	3493			

Table 2.8. 5 Outlook Alfalfa 1999

Alfalfa Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001				2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 28/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
R923	7265	13965	6478	6423	4797	17699	6871	15832	114
RAMBLER	6987	14355	6720	6662	3838	17221	6853	15788	114
DS 9924	7585	14485	6562	6387	3929	16879	7073	15682	113
2065 MF	7445	14640	6655	5834	4100	16589	7050	15615	113
SL 9901	6692	13670	6414	7064	3870	17348	6553	15509	112
SI 9902	5900	13066	6818	7177	3756	17751	6359	15408	111
GIBRALTAR	6605	12961	6313	6733	4312	17358	6459	15160	110
C304	6578	13660	6822	5671	4098	16590	6700	15125	109
CW 4223	6951	13618	6047	6278	4246	16571	6499	15094	109
CW 6408	6684	12848	6194	6589	4412	17195	6439	15021	109
3030	6452	12623	7885	5744	3507	17136	7169	14880	108
DS 9923	6906	13295	5908	5977	4363	16248	6407	14771	107
DS 9928	7066	13502	6093	5822	3945	15859	6579	14681	106
R922	6413	12485	7083	5865	3868	16817	6748	14651	106
ZG 9831	6431	12044	6641	6668	3742	17050	6536	14547	105
GENEVA	6629	12341	6216	5880	4023	16119	6422	14230	103
SL 9900	6170	12575	6615	5229	4041	15884	6392	14230	103
DS 9927	5595	11706	6403	5956	4152	16511	5999	14109	102
DS 9925	6141	12645	6200	5228	4053	15481	6170	14063	102
ANCHOR	5789	11911	6603	6152	3459	16214	6196	14062	102
C227	6184	11818	6888	5644	3469	16000	6536	13909	101
BEAVER	5987	11692	6844	5925	3204	15973	6415	13833	100
DS 9929	6594	13088	6556	5872	3932	13360	6575	13224	96
4241	4914	9761	6774	5420	3971	16165	5844	12963	94
MEAN	6498	12865	6572	6092	3962	16625	6535	14683	
CV (%)	19	14	14	18	13	10			
LSD (0.05)	1778	2582	1317	1531	734	2438			

Table 2.8. 6 Outlook Alfalfa 2000

WFT ALFALFA 2000 OUTLOOK SK Area - IRR

VARIETY	2001 DM YIELD KG/HA CUT 1 21 JUN 01	CUT 2 26 JUL 01	CUT 3 27 AUG 01	TOTAL	% OF BEAVER
DK124	4870	5193	4004	14067	110
9603	4957	5272	3799	14028	110
DK134	4500	5067	4447	14014	110
DS030-BY	4732	5290	3874	13896	109
DS027-BY	4450	4984	4354	13788	108
DS028-BY	4578	4839	4020	13438	105
RANGELANDER	4425	5341	3542	13308	104
54V54	4521	4926	3729	13175	103
EX101	4301	5341	3529	13170	103
3008	4603	4799	3726	13127	103
DS2000	4464	4843	3671	12979	102
CW73038	4331	4673	3965	12970	101
DS029-BY	4424	4594	3811	12829	100
DS380-BY	4614	4643	3551	12808	100
BEAVER	4343	4848	3590	12781	100
AC BLUEJAY	4222	4901	3609	12731	100
RAMBLER	4597	4576	3462	12635	99
MEAN	4525	4949	3805	13279	

Table 2.8. 5 Outlook Alfalfa 1999

Alfalfa Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001				2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 28/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Beaver
R923	7265	13965	6478	6423	4797	17699	6871	15832	114
RAMBLER	6987	14355	6720	6662	3838	17221	6853	15788	114
DS 9924	7585	14485	6562	6387	3929	16879	7073	15682	113
2065 MF	7445	14640	6655	5834	4100	16589	7050	15615	113
SL 9901	6692	13670	6414	7064	3870	17348	6553	15509	112
SI 9902	5900	13066	6818	7177	3756	17751	6359	15408	111
GIBRALTAR	6605	12961	6313	6733	4312	17358	6459	15160	110
C304	6578	13660	6822	5671	4098	16590	6700	15125	109
CW 4223	6951	13618	6047	6278	4246	16571	6499	15094	109
CW 6408	6684	12848	6194	6589	4412	17195	6439	15021	109
3030	6452	12623	7885	5744	3507	17136	7169	14880	108
DS 9923	6906	13295	5908	5977	4363	16248	6407	14771	107
DS 9928	7066	13502	6093	5822	3945	15859	6579	14681	106
R922	6413	12485	7083	5865	3868	16817	6748	14651	106
ZG 9831	6431	12044	6641	6668	3742	17050	6536	14547	105
GENEVA	6629	12341	6216	5880	4023	16119	6422	14230	103
SL 9900	6170	12575	6615	5229	4041	15884	6392	14230	103
DS 9927	5595	11706	6403	5956	4152	16511	5999	14109	102
DS 9925	6141	12645	6200	5228	4053	15481	6170	14063	102
ANCHOR	5789	11911	6603	6152	3459	16214	6196	14062	102
C227	6184	11818	6888	5644	3469	16000	6536	13909	101
BEAVER	5987	11692	6844	5925	3204	15973	6415	13833	100
DS 9929	6594	13088	6556	5872	3932	13360	6575	13224	96
4241	4914	9761	6774	5420	3971	16165	5844	12963	94
MEAN	6498	12865	6572	6092	3962	16625	6535	14683	
CV (%)	19	14	14	18	13	10			
LSD (0.05)	1778	2582	1317	1531	734	2438			

Table 2.8. 6 Outlook Alfalfa 2000

WFT ALFALFA 2000 OUTLOOK SK Area - IRR

	2001 DM YIELD KG/HA				
VARIETY	CUT 1 21 JUN 01	CUT 2 26 JUL 01	CUT 3 27 AUG 01	TOTAL	% OF BEAVER
DK124	4870	5193	4004	14067	110
9603	4957	5272	3799	14028	110
DK134	4500	5067	4447	14014	110
DS030-BY	4732	5290	3874	13896	109
DS027-BY	4450	4984	4354	13788	108
DS028-BY	4578	4839	4020	13438	105
RANGELANDER	4425	5341	3542	13308	104
54V54	4521	4926	3729	13175	103
EX101	4301	5341	3529	13170	103
3008	4603	4799	3726	13127	103
DS2000	4464	4843	3671	12979	102
CW73038	4331	4673	3965	12970	101
DS029-BY	4424	4594	3811	12829	100
DS380-BY	4614	4643	3551	12808	100
BEAVER	4343	4848	3590	12781	100
AC BLUEJAY	4222	4901	3609	12731	100
RAMBLER	4597	4576	3462	12635	99
MEAN	4525	4949	3805	13279	

Table 2.8. 7 Outlook Fescues and Ryegrasses 1995

1995 WF FESCUES AND RYEGRASS TRIAL - Irrigated

SIDC, Outlook, 1998

MEAN DRY MATTER YIELDS IN KG/HA

			1998			3 Year Average	
		24-May	14-Jun	16-Aug		1996-98	AVERAGE YIELD
ENTRY	TYPE	STAND %	CUT 1	CUT 2	TOTAL	AVERAGE	% Courtenay
Courtenay	tall fescue	93	6003	5460	11462	12596	100
MCF 101	tall fescue	94	5528	5125	10652	12029	95
UGG 1501	tall fescue	91	5431	4786	10217	10919	87
Retu	tall fescue	92	5568	5228	10796	10791	86
PS 952	meadow fescue	93	4503	3562	8066	10224	81
Ensign	meadow fescue	92	3644	3206	6851	8486	67
Boreale	creeping red fescue	95	4319	2273	6592	8196	65
Norlea	perennial ryegrass	75	1819	2742	4561	7028	56
PS 953	creeping red fescue	91	3224	1249	4473	5707	45
UGG 1401	perennial ryegrass	13	78	93	170	1875	15
	Mean	**83**	**4012**	**3372**	**7384**	**8785**	
	CV (%)	8	26	34	27	18	
	L.S.D. (0.05)	9	1318	1481	2554	1976	

Table 2.8. 8 Outlook Smooth Bromegrass 1995

1995 WF SMOOTH BROMEGRASS TRIAL - irrigated

SIDC, Outlook, 1998

MEAN DRY MATTER YIELDS IN KG/HA

	1998			3 Year Average	
ENTRY	14-Jun CUT 1	16-Aug CUT 2	TOTAL	1996-98 Average	Average as % of Carlton
Carlton	7357	6184	13541	16262	100
Radisson	6777	6668	13445	15859	98
UGG1801	6563	5803	12366	14978	92
Mean	**6899**	**6218**	**13117**	**15700**	
CV (%)	14	18	11	4	
L.S.D. (0.05)	-	-	-	1028	

Table 2.8. 7 Outlook Fescues and Ryegrasses 1995

1995 WF FESCUES AND RYEGRASS TRIAL - Irrigated

SIDC, Outlook, 1998

MEAN DRY MATTER YIELDS IN KG/HA

			1998			3 Year Average	
ENTRY	TYPE	24-May STAND %	14-Jun CUT 1	16-Aug CUT 2	TOTAL	1996-98 AVERAGE	AVERAGE YIELD % Courtenay
Courtenay	tall fescue	93	6003	5460	11462	12596	100
MCF 101	tall fescue	94	5528	5125	10652	12029	95
UGG 1501	tall fescue	91	5431	4786	10217	10919	87
Retu	tall fescue	92	5568	5228	10796	10791	86
PS 952	meadow fescue	93	4503	3562	8066	10224	81
Ensign	meadow fescue	92	3644	3206	6851	8486	67
Boreale	creeping red fescue	95	4319	2273	6592	8196	65
Norlea	perennial ryegrass	75	1819	2742	4561	7028	56
PS 953	creeping red fescue	91	3224	1249	4473	5707	45
UGG 1401	perennial ryegrass	13	78	93	170	1875	15
	Mean	83	4012	3372	7384	8785	
	CV (%)	8	26	34	27	18	
	L.S.D. (0.05)	9	1318	1481	2554	1976	

Table 2.8. 8 Outlook Smooth Bromegrass 1995

1995 WF SMOOTH BROMEGRASS TRIAL - irrigated

SIDC, Outlook, 1998

MEAN DRY MATTER YIELDS IN KG/HA

	1998			3 Year Average	
ENTRY	14-Jun CUT 1	16-Aug CUT 2	TOTAL	1996-98 Average	Average as % of Carlton
Carlton	7357	6184	13541	16262	100
Radisson	6777	6668	13445	15859	98
UGG1801	6563	5803	12366	14978	92
Mean	**6899**	**6218**	**13117**	**15700**	
CV (%)	14	18	11	4	
L.S.D. (0.05)	-	-	-	1028	

Table 2.8. 9 Outlook Timothy, Orchardgrass and Meadow Foxtail 1995

1995 WF TIMOTHY , ORCHARDGRASS, MEADOW FOXTAIL TRIAL - irrigated
SIDC, Outlook, 1997
MEAN DRY MATTER YIELDS IN KG/HA

			1998			3 Year Average	
		26-May	14-Jun	16-Aug	1998	1996-98	
ENTRY	TYPE	STAND %	CUT 1	CUT 2	TOTAL	AVERAGE	% of Climax
Climax	timothy	95	5575	2256	7830	10606	100
Dan	meadow foxtail	96	4967	3636	8603	10200	96
UGG 1701	timothy	91	5618	2099	7718	9270	87
BOR 80102	timothy	95	5105	2046	7150	9008	85
Tuuka	timothy	93	5118	2670	7787	8907	84
Mountain	meadow foxtail	90	4729	2832	7560	8802	83
UGG 1702	timothy	91	5227	1943	7171	8229	78
Kay	orchardgrass	78	5004	2766	7770	6888	65
Roughrider	orchardgrass	71	4412	2943	7354	6735	63
Haka	orchardgrass	79	4804	2829	7633	6184	58
PS 951	orchardgrass	68	4654	2838	7492	5672	53
Jay	orchardgrass	65	4466	2860	7325	5379	51
	Mean	84	4973	2643	7616	7990	
	CV (%)	13	13	18	10	15	
	L.S.D. (0.05)	15	-	671	-	1769	

Table 2.8. 10 Outlook Red Clover 1998

Red Clover Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001				3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 30/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
WILDCAT	8334	14685	5920	11215	6076	6524	3477	16076	6777	13992	114
GORBY	7864	13125	6322	11020	6152	6708	3023	15883	6779	13343	109
ALTASWEDE	7422	12082	5337	8946	5992	7051	2771	15814	6250	12281	100
MEAN	7874	13848	5859	10393	6073	6761	3090	15924	6602	13205	
CV (%)	20	13	31	21	7	22	46	7			
LSD (0.05)	ns	ns	ns	ns	ns	ns	ns	ns			

Table 2.8. 9 Outlook Timothy, Orchardgrass and Meadow Foxtail 1995

1995 WF TIMOTHY, ORCHARDGRASS, MEADOW FOXTAIL TRIAL - irrigated

SIDC, Outlook, 1997

MEAN DRY MATTER YIELDS IN KG/HA

			1998			3 Year Average	
ENTRY	TYPE	26-May STAND %	14-Jun CUT 1	16-Aug CUT 2	1998 TOTAL	1996-98 AVERAGE	% of Climax
Climax	timothy	95	5575	2256	7830	10606	100
Dan	meadow foxtail	96	4967	3636	8603	10200	96
UGG 1701	timothy	91	5618	2099	7718	9270	87
BOR 80102	timothy	95	5105	2046	7150	9008	85
Tuuka	timothy	93	5118	2670	7787	8907	84
Mountain	meadow foxtail	90	4729	2832	7560	8802	83
UGG 1702	timothy	91	5227	1943	7171	8229	78
Kay	orchardgrass	78	5004	2766	7770	6888	65
Roughrider	orchardgrass	71	4412	2943	7354	6735	63
Haka	orchardgrass	79	4804	2829	7633	6184	58
PS 951	orchardgrass	68	4654	2838	7492	5672	53
Jay	orchardgrass	65	4466	2860	7325	5379	51
	Mean	**84**	**4973**	**2643**	**7616**	**7990**	
	CV (%)	13	13	18	10	15	
	L.S.D. (0.05)	15	-	671	-	1769	

Table 2.8. 10 Outlook Red Clover 1998

Red Clover Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001				3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	CUT#3 Forage Yield (kg DM/ha) Aug. 30/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
WILDCAT	8334	14685	5920	11215	6076	6524	3477	16076	6777	13992	114
GORBY	7864	13125	6322	11020	6152	6708	3023	15883	6779	13343	109
ALTASWEDE	7422	12082	5337	8946	5992	7051	2771	15814	6250	12281	100
MEAN	7874	13848	5859	10393	6073	6761	3090	15924	6602	13205	
CV (%)	20	13	31	21	7	22	46	7			
LSD (0.05)	ns	ns	ns	ns	ns	ns	ns	ns			

Table 2.8. 11 Outlook Clover 1999

Red Clover Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
ALTASWEDE	8735	13196	6977	8435	15412	7856	14304	100
VIVI (RED)	8415	12894	5865	8698	14563	7140	13729	96
BOR 2222	6751	10879	6370	9515	15885	6560	13382	94
AURORA	5591	10173	6309	10280	16589	5950	13381	94
NSCL 29	5856	9929	6210	8426	14636	6033	12282	86
MEAN	7069	11414	6346	9071	15417	6708	13416	
CV (%)	17	16	14	23	14			
LSD (0.05)	1877	2740	ns	s	ns			

Table 2.8. 12 Outlook Bird's-foot Trefoil 1996

Birdsfoot Trefoil Variety Adaptation Test
Outlook, SK
Sown May 1996

Variety	1997	1998	1999	2000			4 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 28/06/2000	CUT#2 Forage Yield (kg DM/ha) 16/08/2000	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Leo
UGG 1301 (AC Langille)	9321	13088	13286	3676	4383	8059	10939	109
LEO	9672	11180	11376	4091	3832	7923	10038	100
MEAN	9496	12134	12331	3884	4107	7991	10488	
CV (%)	10	5	4	16	20	18		
LSD (0.05)	ns	1429	1128	ns	ns	ns		

Table 2.8. 11 Outlook Clover 1999

Red Clover Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) July 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Altaswede
ALTASWEDE	8735	13196	6977	8435	15412	7856	14304	100
VIVI (RED)	8415	12894	5865	8698	14563	7140	13729	96
BOR 2222	6751	10879	6370	9515	15885	6560	13382	94
AURORA	5591	10173	6309	10280	16589	5950	13381	94
NSCL 29	5856	9929	6210	8426	14636	6033	12282	86
MEAN	7069	11414	6346	9071	15417	6708	13416	
CV (%)	17	16	14	23	14			
LSD (0.05)	1877	2740	ns	s	ns			

Table 2.8. 12 Outlook Bird's-foot Trefoil 1996

Birdsfoot Trefoil Variety Adaptation Test
Outlook, SK
Sown May 1996

Variety	1997	1998	1999	2000			4 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 28/06/2000	CUT#2 Forage Yield (kg DM/ha) 16/08/2000	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Leo
UGG 1301 (AC Langille)	9321	13088	13286	3676	4383	8059	10939	109
LEO	9672	11180	11376	4091	3832	7923	10038	100
MEAN	9496	12134	12331	3884	4107	7991	10488	
CV (%)	10	5	4	16	20	18		
LSD (0.05)	ns	1429	1128	ns	ns	ns		

Table 2.8. 13 Outlook Cicer Milk-Vetch 1996

Cicer Milk-Vetch Variety Adaptation Test
Outlook, SK.
Sown May 1996

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/00	CUT#2 Forage Yield (kg DM/ha) 08/16/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Oxley
UGG1901 (Windsor)	6956	14213	5033	3983	9016	10062	101
OXLEY	6996	13906	5080	3941	9020	9974	100
LRC92-1	7635	13364	4435	4019	8454	9818	98
LRC93-1	6369	12498	5099	4194	9293	9387	94
MEAN	6991	13495	4912	4034	8946	9811	
CV (%)	12	8	7	8	5		
LSD (0.05)	ns	ns	522	ns	ns		

Table 2.8. 14 Outlook Crested Wheatgrass 1998

1997 Crested Wheatgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
S-9240	16946	22721	2797	6113	12177	1192	13369	10640	14068	108
KIRK	12868	18489	2979	6481	12533	1558	14090	9460	13020	100
CD 11	11817	17213	2454	5142	12080	1358	13439	8784	11931	92
MEAN	13877	19474	2743	5912	12263	1369	13633	9628	13006	
CV (%)	10	8	23	22	6	36	8			
LSD (0.05)	2357	2630	ns	ns	ns	ns	n			

Table 2.8. 13 Outlook Cicer Milk-Vetch 1996

Cicer Milk-Vetch Variety Adaptation Test
Outlook, SK.
Sown May 1996

Variety	1998	1999	2000			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/28/00	CUT#2 Forage Yield (kg DM/ha) 08/16/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Oxley
UGG1901 (Windsor)	6956	14213	5033	3983	9016	10062	101
OXLEY	6996	13906	5080	3941	9020	9974	100
LRC92-1	7635	13364	4435	4019	8454	9818	98
LRC93-1	6369	12498	5099	4194	9293	9387	94
MEAN	6991	13495	4912	4034	8946	9811	
CV (%)	12	8	7	8	5		
LSD (0.05)	ns	ns	522	ns	ns		

Table 2.8. 14 Outlook Crested Wheatgrass 1998

1997 Crested Wheatgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
S-9240	16946	22721	2797	6113	12177	1192	13369	10640	14068	108
KIRK	12868	18489	2979	6481	12533	1558	14090	9460	13020	100
CD 11	11817	17213	2454	5142	12080	1358	13439	8784	11931	92
MEAN	13877	19474	2743	5912	12263	1369	13633	9628	13006	
CV (%)	10	8	23	22	6	36	8			
LSD (0.05)	2357	2630	ns	ns	ns	ns	n			

Table 2.8. 15 Outlook Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 20/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
KIRK	12617	20163	12250	4402	16652	12434	18407	100
VAVILOV	9260	15421	11739	4402	16030	10500	15726	85
DOUGLAS	9308	14594	10403	2795	13198	9856	13896	75
MEAN	10395	16726	11464	3829	15293	10930	16010	
CV (%)	9	7	8	17	7			
LSD (0.05)	1527	1931	ns	1139	1934			

Table 2.8. 16 Outlook Timothy 1996

Timothy Variety Adaptation Test
Outlook, SK.
Sown May 1996

Variety	1997	1998	1999			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/05/99	CUT#2 Forage Yield (kg DM/ha) 08/30/99	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
BOR 1342	13144	9221	10239	3537	13775	12047	115
CLIMAX	10476	9101	8725	3072	11796	10458	100
AC ALLIANCE	13574	9078	8392	3049	11441	11364	109
BOR 94322	11806	8862	9108	2256	11365	10678	102
UGG 1703 (Grinstad)	12869	9284	8596	2538	11133	11095	106
MEAN	12374	9109	9012	2890	11902	11128	
CV (%)	11	8	13	17	9		
LSD (0.05)	2156	ns	ns	769	1649		

Table 2.8. 15 Outlook Crested Wheatgrass 1999

Crested Wheatgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 28/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 20/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kirk
KIRK	12617	20163	12250	4402	16652	12434	18407	100
VAVILOV	9260	15421	11739	4402	16030	10500	15726	85
DOUGLAS	9308	14594	10403	2795	13198	9856	13896	75
MEAN	10395	16726	11464	3829	15293	10930	16010	
CV (%)	9	7	8	17	7			
LSD (0.05)	1527	1931	ns	1139	1934			

Table 2.8. 16 Outlook Timothy 1996

Timothy Variety Adaptation Test
Outlook, SK.
Sown May 1996

Variety	1997	1998	1999			3 Year Average	
	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 07/05/99	CUT#2 Forage Yield (kg DM/ha) 08/30/99	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Climax
BOR 1342	13144	9221	10239	3537	13775	12047	115
CLIMAX	10476	9101	8725	3072	11796	10458	100
AC ALLIANCE	13574	9078	8392	3049	11441	11364	109
BOR 94322	11806	8862	9108	2256	11365	10678	102
UGG 1703 (Grinstad)	12869	9284	8596	2538	11133	11095	106
MEAN	12374	9109	9012	2890	11902	11128	
CV (%)	11	8	13	17	9		
LSD (0.05)	2156	ns	ns	769	1649		

Table 2.8. 17 Outlook Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
KAY	10356	13646	4630	7009	8124	-	8124	7703	9593	100
OFI 93L	9749	13002	4802	7200	8055	-	8055	7535	9419	98
OG96-2	10712	13446	4857	6811	7775	-	7775	7781	9344	97
OG96-1	10580	13466	4607	6422	7928	-	7928	7705	9272	97
OG96-3	11133	13562	4939	6755	6827	-	6827	7633	9048	94
MEAN	10506	13424	4768	6839	7742	-	7742	7672	9335	
CV (%)	5	4	21	17	9	-	9			
LSD (0.05)	832	ns	1562	1750	1061	-	1061			

Table 2.8. 18 Outlook Westerwolds 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Outlook, SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/21/00	CUT#2 Forage Yield (kg DM/ha) 08/10/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
NSCL 30	8342	10729	4167	14896	11619	101
AUBADE	8261	10743	4083	14826	11544	100
MEAN	8301	10736	4125	14861	11581	
CV (%)	4	11	8	6		
LSD (0.05)	ns	ns	ns	ns		

Table 2.8. 17 Outlook Orchardgrass 1998

Orchardgrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 6/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) -	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
KAY	10356	13646	4630	7009	8124	-	8124	7703	9593	100
OFI 93L	9749	13002	4802	7200	8055	-	8055	7535	9419	98
OG96-2	10712	13446	4857	6811	7775	-	7775	7781	9344	97
OG96-1	10580	13466	4607	6422	7928	-	7928	7705	9272	97
OG96-3	11133	13562	4939	6755	6827	-	6827	7633	9048	94
MEAN	10506	13424	4768	6839	7742	-	7742	7672	9335	
CV (%)	5	4	21	17	9	-	9			
LSD (0.05)	832	ns	1562	1750	1061	-	1061			

Table 2.8. 18 Outlook Westerwolds 1999 and 2000

Westerwolds Annual Ryegrass Variety Adaptation Test
Outlook, SK.
Sown May 1999 and 2000

Variety	1999	2000			2 Year Average	
	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) 06/21/00	CUT#2 Forage Yield (kg DM/ha) 08/10/00	Total Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Aubade
NSCL 30	8342	10729	4167	14896	11619	101
AUBADE	8261	10743	4083	14826	11544	100
MEAN	8301	10736	4125	14861	11581	
CV (%)	4	11	8	6		
LSD (0.05)	ns	ns	ns	ns		

Table 2.8. 19 Outlook Timothy 1998

Timothy Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
JOLIETTE	10453	14380	6369	8648	8796	1999	10795	8539	11274	107
BOR 72002	11311	14470	5627	7635	9232	1625	10857	8723	10987	104
BOR 94301	10506	14044	5533	7979	8680	1800	10480	8240	10834	102
CLIMAX	10742	13895	5756	7657	8558	1607	10165	8352	10572	100
MEAN	10753	14197	5821	7980	8816	1758	10574	8464	10917	
CV (%)	5	5	14	12	10	27	12			
LSD (0.05)	ns	ns	ns	ns	ns	ns	ns			

Table 2.8. 20 Outlook Timothy 1999

Timothy Variety Adaptation Test
Outlook
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 20/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
CLIMAX	3457	2516	10367	6901	17268	6912	9892	100
GPT 18906	2039	2216	9406	4986	14392	5723	8304	84
GPT 18905	2549	1551	8998	5759	14756	5773	8153	82
MEAN	2682	2094	9590	5882	15472	6136	8783	
CV (%)	35	14	9	14	8			
LSD (0.05)	1623	501	ns	ns	2172			

Table 2.8. 19 Outlook Timothy 1998

Timothy Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
JOLIETTE	10453	14380	6369	8648	8796	1999	10795	8539	11274	107
BOR 72002	11311	14470	5627	7635	9232	1625	10857	8723	10987	104
BOR 94301	10506	14044	5533	7979	8680	1800	10480	8240	10834	102
CLIMAX	10742	13895	5756	7657	8558	1607	10165	8352	10572	100
MEAN	10753	14197	5821	7980	8816	1758	10574	8464	10917	
CV (%)	5	5	14	12	10	27	12			
LSD (0.05)	ns	ns	ns	ns	ns	ns	ns			

Table 2.8. 20 Outlook Timothy 1999

Timothy Variety Adaptation Test
Outlook
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 27/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 20/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha) -	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
CLIMAX	3457	2516	10367	6901	17268	6912	9892	100
GPT 18906	2039	2216	9406	4986	14392	5723	8304	84
GPT 18905	2549	1551	8998	5759	14756	5773	8153	82
MEAN	2682	2094	9590	5882	15472	6136	8783	
CV (%)	35	14	9	14	8			
LSD (0.05)	1623	501	ns	ns	2172			

Table 2.8. 21 Outlook Timothy 2000

Timothy Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
JOLIETTE	10453	14380	6369	8648	8796	1999	10795	8539	11274	107
BOR 72002	11311	14470	5627	7635	9232	1625	10857	8723	10987	104
BOR 94301	10506	14044	5533	7979	8680	1800	10480	8240	10834	102
CLIMAX	10742	13895	5756	7657	8558	1607	10165	8352	10572	100
MEAN	10753	14197	5821	7980	8816	1758	10574	8464	10917	
CV (%)	5	5	14	12	10	27	12			
LSD (0.05)	ns	ns	ns	ns	1421	752	1985			

Table 2.8. 22 Outlook bromegrass 1998

Bromegrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 20/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
CARLTON	13061	18963	12423	5721	18144	12742	18553	100
LOBF9201	13784	19702	11415	5290	16705	12600	18203	98
MB-A	11990	18823	12131	4848	16979	12061	17901	96
LOBF9202	11967	17978	11814	4915	16729	11890	17353	94
S-9356	10537	16837	10937	5350	16288	10737	16563	89
FLEET	11796	17226	11128	4235	15363	11462	16295	88
MEAN	12189	18255	11641	5060	16701	11915	17478	
CV (%)	9	7	15	27	11			

Table 2.8. 21 Outlook Timothy 2000

Timothy Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	1999		2000		2001			3 Year Average		
	CUT#1 Forage Yield (kg DM/ha) July 7/1999	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 21/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 27/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
JOLIETTE	10453	14380	6369	8648	8796	1999	10795	8539	11274	107
BOR 72002	11311	14470	5627	7635	9232	1625	10857	8723	10987	104
BOR 94301	10506	14044	5533	7979	8680	1800	10480	8240	10834	102
CLIMAX	10742	13895	5756	7657	8558	1607	10165	8352	10572	100
MEAN	10753	14197	5821	7980	8816	1758	10574	8464	10917	
CV (%)	5	5	14	12	10	27	12			
LSD (0.05)	ns	ns	ns	ns	1421	752	1985			

Table 2.8. 22 Outlook bromegrass 1998

Bromegrass Variety Adaptation Test
Outlook, Sask.
Sown May 1998
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 20/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Carlton
CARLTON	13061	18963	12423	5721	18144	12742	18553	100
LOBF9201	13784	19702	11415	5290	16705	12600	18203	98
MB-A	11990	18823	12131	4848	16979	12061	17901	96
LOBF9202	11967	17978	11814	4915	16729	11890	17353	94
S-9356	10537	16837	10937	5350	16288	10737	16563	89
FLEET	11796	17226	11128	4235	15363	11462	16295	88
MEAN	12189	18255	11641	5060	16701	11915	17478	
CV (%)	9	7	15	27	11			

Table 2.8. 23 Outlook Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 28/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
TROY	9507	16196	11127	5854	16981	10317	16589	100
KVER 003	8108	14930	9779	6513	16291	8944	15611	94
MEAN	8808	15563	10453	6184	16636	9630	16100	
CV (%)	9	7	15	6	11			
LSD (0.05)	ns	ns	ns	ns	ns			

Table 2.8. 23 Outlook Kentucky Bluegrass 1999

Kentucky Bluegrass Variety Adaptation Test
Outlook, Sask.
Sown May 1999
Irrigation

Variety	2000		2001			2 Year Average		
	CUT#1 Forage Yield (kg DM/ha) June 20/2000	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha) June 19/2001	CUT#2 Forage Yield (kg DM/ha) Aug. 28/2001	Total Forage Yield (kg DM/ha)	CUT#1 Forage Yield (kg DM/ha)	Total Forage Yield (kg DM/ha)	% of Kay
TROY	9507	16196	11127	5854	16981	10317	16589	100
KVER 003	8108	14930	9779	6513	16291	8944	15611	94
MEAN	8808	15563	10453	6184	16636	9630	16100	
CV (%)	9	7	15	6	11			
LSD (0.05)	ns	ns	ns	ns	ns			

Appendix A

Table A. 1 Kindersley and Melfort Weather Data

Saskatchewan Weather Data

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Kindersley (Netherhill)														
Mean Monthly Temperature (C)	2001	-8.7	-16.8	-2.6	-5.9	4.4	14.7	19.0	20.1	14.3	2.9			4.1
	2000	-15.7	-12.1	-1.5	4.3	10.5	13.7	19.1	17.7	11.4	5.3	3.8	-17.0	3.3
	1999	-14.9	-7.2	-3.5	5.4	9.9	14.6	16.1	18.2	10.5	5.2	1.1	-5.3	4.2
	1998	-17.7	-6.9	-6.5	7.5	13.2	14.5	19.9	20.5	13.8	6.2	3.1	-11.5	4.7
	1997	-19.5	-10.0	-7.1	2.4	10.3	16.1	18.5	18.3	14.3	4.3	2.9	-5.5	3.8
	1996	-22.2	-12.2	-9.9	4.2	8.1	15.4	17.9	18.9	10.2	3.3	-11.9	-17.9	0.3
	30yr. Norm	-15.5	-11.8	-5.6	4.1	11.3	16.1	18.3	17.6	11.4	5.1	-5.5	-13.6	2.7
Total Monthly Precipitation (mm)	2001	3.6	8.0	1.8	41.3	4.2	24.2	40.8	1.2	10.2	9.6			144.9
	2000	20.6	5.2	17.7	18.2	11.3	43.6	24.9	48.4	46	5.0	62.8	11.6	315.3
	1999	20.5	2.2	31.4	48.8	86.8	76.0	90.2	25.1	0.6	4.5	4.1	18.5	408.7
	1998	14.0	6.6	2.6	15.6	28.3	124.0	45.8	28.0	20.2	7.8	14.0	16.0	322.9
	1997	9.4	0.8	16.2	37.5	42.6	79.4	59.8	37.2	45.2	19.8	0.8	0.4	349.1
	1996	8.8	2.2	4.2	32.2	79.2	84.5	68.6	13.8	60.6	8.9	20.7	20.3	404.0
	30yr. Norm	14.6	11.9	14.9	19.9	35.6	56.6	55.2	37.9	27.0	13.0	12.5	17.9	317.0
Melfort (Tisdale: 1997-98 alfalfa)														
Mean Monthly Temperature (C)	2001	-9.1	-18.2	-5.4	-7.5	3.5	14.1	18.8	19.1	13.6	3.5	-3.3		2.6
	2000	-18.6	-11.1	-1.5	2.8	9.1	13.0	17.6	16.5	11	4.4	3.2	-21.4	2.1
	1999	-17.9	-10.9	-4.1	5.7	10.2	14.0	15.6	16.9	9.9	3.3	-1.2	-8.0	2.8
	1998	-18.8	-6.0	-8.4	6.6	13.1	14.0	17.9	19.2	12.2	3.0	-4.7	-5.6	3.5
	1997	-22.3	-12.6	-11.0	-2.6	8.7	16.8	18.5	17.6	13.2	2.6	-4.6	-5.6	1.6
	30yr. Norm	-19.1	-15.5	-9.0	2.2	10.6	15.5	17.6	16.3	10.4	3.9	-7.0	-16.2	0.8
Total Monthly Precipitation (mm)	2001	4.5	9.6	2.6	60.0	11.1	20.4	46.4	11.4	12.0	9.9	9.1		197.0
	2000	18.6	6.4	4.4	15	42.6	73.6	106.4	49.6	25.4	25.4	6.6	39.6	413.6
	1999	9.2	3.6	1.5	41.4	41.5	56.0	96.0	36.0	19.2	11.2	3.8	2.2	321.6
	1998	2.8	1.6	2.2	19.0	15.2	87.8	42.8	6.2	31.4	20.0	11.6	1.8	242.4
	1997	36.8	16.7	12.3	30.2	29.0	96.3	51.3	41.3	57.2	30.6	8.6	12.4	422.7
	30yr. Norm	17.7	13.9	18.5	20.7	41.4	61.9	66.6	53.1	41.4	26.6	18.2	22.5	402.5

Table A. 2 Nipawin and Saskatoon Weather Data

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Nipawin														
Mean Monthly Temperature (C)	2001	-10.9	-18.5	-5.9	-8.3	3.6	14.0	18.5	18.7	13.2	2.3			2.7
	2000	-20.9	-12.6	-2.7	2.3	9.1	13.0	17.9	16.9	10.8	4.4	3.0	-23.3	1.5
	1999	-18.5	-13.6	-5.6	5.9	10.4	14.7	16.6	17.2	10.3	3.1	-2.6	-10.1	2.3
	1998	-20.4	-6.6	-8.5	6.9	11.6	14.3	18.3	19.2	12.4	4.5	-5.2	-15.8	2.6
	1997	-23.0	-13.1	-12.0	-0.8	8.6	16.4	18.3	17.4	12.7	2.7	-5.2	-6.3	1.3
	1996	-25.1	-15.5	-13.8	-0.4	8.0	16.4	16.5	17.5	10.1	3.8	-13.3	-20.9	-1.4
	30yr. Norm	-20.0	-16.3	-9.3	2.3	10.7	15.7	18.0	16.6	10.3	4.3	-6.8	-15.8	0.8
Total Monthly Precipitation (mm)	2001	6.4	11.2	1.6	73.4	13.2	84.6	120.0	17.8	3.2	8.8			340.2
	2000	25.6	13.8	4.2	11.8	60.6	111.6	182.2	67.8	14.4	0.0	30.0	25.4	547.4
	1999	16.2	7.6	2.0	49.6	33.0	75.2	115.4	47.8	13.6	26.4	28.6	25	440.4
	1998	33.0	9.6	3.0	7.0	16.4	80.6	81.6	26.2	24.8	66.4	2.6	23.2	374.4
	1997	38.4	10.0	27.4	29.2	31.4	65.6	21.0	71.0	75.4	51.4	11.4	10.2	442.4
	1996	6.8	9.2	17.8	61.8	90.4	42.0	73.8	16.8	84.0	45.8	24.4	16.8	489.6
	30yr. Norm	14.5	13.3	20.0	21.9	46.3	73.7	70.3	60.8	40.8	21.0	21.2	19.8	423.6
Saskatoon (Kernen)														
Mean Monthly Temperature (C)	2001	-9.4	-17.6	-3.4	4.2	11.8	15.1	19.4	19.8	13.5	2.1			5.6
	2000	-17.3	-11.2	-2.0	3.2	9.9	14.0	18.3	16.4	11.5	4.4	-6.8	-19.6	1.7
	1999	-17.5	-9.3	-4.1	5.9	10.1	13.9	16.1	17.5	9.9	3.9	-1.5	-7.6	3.1
	1998	-18.3	-5.8	-7.6	6.8	12.5	14.4	18.5	19.8	13.1	4.4	-4.4	-13.1	3.4
	1997	-21.1	-11.3	-9.8	2.2	10.2	16.5	18.6	17.8	13.5	4.0	-4.0	-5.9	2.6
	1996	-24.6	-13.9	-11.4	3.1	8.4	15.9	17.6	18.1	10.2	2.4	-12.6	-19.4	-0.5
	30yr. Norm	-17.5	-13.9	-7.0	3.9	11.5	16.2	18.6	17.4	11.2	4.8	-6.0	-14.7	2.0
Total Monthly Precipitation (mm)	2001	0.2	0.0	0.0	0.0	26.4	35.6	53.6	11.4	11.2	0.0			138.4
	2000	0.2	6.2	13.6	26.6	15.2	53.2	74.2	37.8	19.2	0.8	0.2	2.4	249.6
	1999	1.8	0.1	1.8	16.8	54.8	48.8	93.6	32.2	12.2	4.2	1.8	0.2	268.3
	1998	0.0	2.6	8.4	13.4	12.0	57.0	52.0	61.6	61.0	20.4	10.6	0.6	299.6
	1996	13.8	12.4	11.8	30.1	58.7	100.8	114.2	18.4	39.9	5.5	22.7	16.6	444.9
	30yr. Norm	15.9	12.9	16.0	19.7	44.2	63.4	58.0	36.8	32.1	16.9	14.1	17.2	347.2

Table A. 3 Swift Current and Yorkton Weather Data

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Swift Current (CDA)														
Mean Monthly Temperature (C)	2001	-5.2	-13.9	-0.9	-3.9	5.1	15.2	19.4	20.8	15.1	4.2			5.6
	2000	-11.5	-8.0	-0.9	4.6	11.1	13.4	19.2	18.1	12.4	6.3	5.1	-14.2	4.6
	1999	-12.4	-4.9	-1.8	5.6	9.9	14.2	16.4	18.9	10.1	2.1	4.0	-3.2	4.9
	1998	-13.9	-1.9	-3.8	7.5	12.5	14.0	20.1	20.9	15.3	6.6	-1.0	-9.6	5.6
	1997	-15.8	-6.6	-4.7	2.7	10.3	16.3	18.1	18.7	15.2	5.2	-1.8	-3.2	4.5
	1996	-18.2	-8.1	-8.1	4.5	7.8	15.6	18.0	18.7	10.1	4.1	-8.3	-14.7	1.8
	30yr. Norm	**-12.8**	**-9.6**	**-3.9**	**4.5**	**11.0**	**15.7**	**18.4**	**17.9**	**11.7**	**5.9**	**-3.7**	**-10.6**	**3.7**
Total Monthly Precipitation (mm)	2001	6.5	6.5	3.0	81.6	6.1	25.0	70.5	4.5	4.5	20.7			228.9
	2000	10.9	17.2	16.1	26.3	21.6	72.2	98	23	43.7	34.0	81.7	19.0	463.7
	1999	21.5	6.5	14.5	25.5	93.9	86.4	60.3	16.8	12.0	8.8	5.6	18	369.8
	1998	14.2	6.2	16.2	15.9	38.1	90.5	37.0	35.3	25.8	41.7	24.0	25.5	370.4
	1997	14.7	1.5	39.6	41.8	49.9	69.8	43.8	48.0	15.0	22.1	2.2	0.2	348.6
	1996	11.9	6.4	10.6	21.8	65.0	77.7	23.1	32.6	105.7	14.3	39.0	30.7	438.8
	30yr. Norm	**15.3**	**13.6**	**17.5**	**21.8**	**42.1**	**66.1**	**44.0**	**35.4**	**30.9**	**15.4**	**12.0**	**16.2**	**330.3**
Yorkton (Canora)														
Mean Monthly Temperature (C)	2001	-10.2	-18.4	-6.9	-8.2	2.9	14.6	18.6	19.2	12.9	2.6			2.7
	2000	-16.7	-9.7	-1.3	3.2	10.3	13.1	18.5	17.3	11.2	5.2	3.1	-21.9	2.7
	1999	-17.9	-10.3	-5.2	6.1	10.4	14.4	17.2	17.1	10.0	3.6	0.2	-7.0	3.2
	1998	-17.9	-5.5	-8.7	6.8	11.5	14.1	18.3	19.0	13.3	5.0	-4.3	-13.6	3.2
	30yr. Norm	**-18.4**	**-15.0**	**-8.2**	**2.7**	**10.6**	**15.8**	**18.2**	**16.9**	**10.8**	**4.6**	**-6.0**	**-15.3**	**1.4**
Total Monthly Precipitation (mm)	2001	2.2	12.4	6.6	122.0	19.2	35.2	33.0	13.6	48.4	20.8			313.4
	2000	15.4	0.4	6	23.4	29.4	93	59.2	47	54.2	5.0	98.2	30.4	461.6
	1999	14.8	13.4	6.8	16.0	122.0	68.8	53.8	88.0	43.8	37.2	12.8	9.8	487.2
	1998	25.4	18.0	6.8	6.0	17.6	117.2	167.8	28.0	76.0	49.6	10.8	13.4	536.6
	30yr. Norm	**21.3**	**16.3**	**24.9**	**22.3**	**49.2**	**71.9**	**66.3**	**55.6**	**47.7**	**24.5**	**17.8**	**21.0**	**438.8**

Table A. 4 Outlook Weather Data

Outlook (PFRA)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Mean Monthly Temperature (C)	2001	-7.2	-15.5	-1.6	-4.8	5.8	15.2	19.7	19.8	14.7	3.9			5.0
	2000	-14.2	-9.1	-0.2	4.8	11.8	14.4	19.2	17.9	12.7	5.7	5.2	-17.0	4.3
	1999	-14.5	-6.1	-2.1	6.8	10.6	15.1	16.9	18.3	11.1	2.1	2.7	-3.3	4.8
	1998	-16.3	-8.9	-4.8	8.2	13.2	15.2	20.3	20.6	14.5	6.5	-1.8	-9.8	4.7
	1997	-17.6	-9.1	-6.7	3.4	11.0	17.4	18.8	18.7	14.9	5.1	-2.0	-3.1	4.2
	1996	-21.1	-10.5	-8.4	3.3	8.5	16.5	18.3	19.1	10.8	4.1	-10.7	-16.6	1.1
	30yr. Norm	**-15.5**	**-11.8**	**-5.3**	**4.6**	**11.8**	**16.6**	**19.0**	**18.0**	**12.0**	**5.9**	**-4.5**	**-12.7**	**3.2**
Total Monthly Precipitation (mm)	2001	1.0	7.1	6.6	8.7	24.2	27.9	99.2	2.4	13.4	27.6			218.1
	2001irrig	0.0	0.0	0.0	0.0	30.0	75.0	145.0	100.0	75.0	0.0	0.0	0.0	*425.0*
	2000	29.3	7.9	12.7	33	15.4	50.8	82.2	49.5	34.6	6.1	56.2	31.4	409.1
	2000irrig	0.0	0	0	0	15	50	75	0	25	0.0	0.0	0.0	*165.0*
	1999	3.6	4.0	4.4	12.0	61.4	63.2	91.2	37.8	11.6	2.4	3.8	10.2	305.6
	1999irrig	0.0	0.0	0.0	0.0	0.0	15.0	15.0	50.0	25.0	0.0	0.0	0.0	*105.0*
	1998	1.4	2.6	3.2	7.2	12.4	112.4	21.0	73.4	45.2	38.2	9.6	13.0	339.6
	1998irrig	0.0	0.0	0.0	0.0	40.0	60.0	90.0	40.0	20.0	0.0	0.0	0.0	*250.0*
	1997	22.8	3.6	27.1	22.1	28.2	64.6	6.2	29.3	30.4	15.0	4.1	2.4	255.8
	1997irrig	0.0	0.0	0.0	0.0	0.0	50.0	170.0	25.0	0.0	0.0	0.0	0.0	*245.0*
	1996	9.2	8.0	2.0	42.0	68.5	61.4	60.5	5.0	60.4	7.9	20.6	40.2	385.7
	1996irrig	0.0	0.0	0.0	0.0	0.0	15.0	91.0	25.0	0.0	0.0	0.0	0.0	*131.0*
	30yr. Norm	**14.8**	**13.0**	**17.9**	**17.9**	**39.3**	**60.4**	**54.5**	**34.2**	**28.6**	**13.6**	**12.8**	**16.4**	**323.4**

19970291

Annual Ryegrass

Compiled by Randy Paslt M.Sc. P.Ag., Research Project Manager, Saskatchewan Forage Council

In recent years, annual ryegrass has become a popular choice for forage production at a number of locations in the Black/Grey wood climatic zones and under irrigation in Saskatchewan.

Italian ryegrass (Lolium multiflorum) is a biennial from Northern Italy that does not survive our Canadian winters and therefore does not normally produce seed. Italian ryegrass has lush leaves with many tillers, is suitable for pasture and works well for late fall/winter grazing. Because it remains vegetative long into the fall, it has very high quality and energy similar to annual forage crops such as barley and oat (Duane McCartney – WFBG School - June 2001). In trials conducted by the SFC at Saskatoon and Melfort over the winter of 1997/98, Italian ryegrass maintained a crude protein content of greater than 17% from November 1997 to April 1998 (SFC Final report to ADF – 1998). In addition, the ADF and NDF levels of the forage were in the low twenties and fifties respectively, an indication of high quality forage with high intake value. Italian ryegrass is best suited for the Black/Grey wooded soil climatic zone or production under irrigation. It is a shallow rooted crop that cannot tolerate periods of extended drought, especially if it has not had adequate time to establish. Fertility requirements are similar to cereal forages.

Westerwolds (Lolium multiflorum westerwoldicum) was developed in Holland from a cultivar of Italian ryegrass that produces seed in the year of establishment. This annual ryegrass type does not over winter in Canada and is therefore a true annual. Westerwolds is much more stemmy and upright than Italian ryegrass and has been used for hay, silage and grazing. It is a prolific seed producer and if allowed to produce seed, it can become a weed in subsequent crops. Like Italian ryegrass, westerwolds requires high fertility similar to cereal forage crops. Because of its high moisture requirements, westerwolds ryegrass is best suited for the Black/Grey wooded soil climatic zone or irrigation.

Annual ryegrass belongs to the Lolium family and like its cousin; Lolium rigidum, is able to rapidly develop herbicide resistance within a population. There are several characteristics of these ryegrasses that predispose them to the development of herbicide resistance: 1) annual life cycle (Westerwolds); 2) high reproductive capacity; 3) short seed viability in the soil; 4) complex genetic variability; 5) out crossing reproductive system; 6) generally capable of developing two types of herbicide resistance (target site or enhanced metabolism); 7) Some populations have been reported to have high herbicide resistance before herbicide applications began. (Agriculture and Agri-Food Canada – Strategies for Avoiding Herbicide Resistance in Ryegrass – February 1999).

Most sources indicate that the seeding rate of annual ryegrass should be somewhere between 25 – 30 seeds per linear foot of row on a one foot row spacing (13 lbs/acre) or 10 – 15 seeds per linear foot of row on a six inch row spacing (12 lbs/acre). The following is a sample equation taken from the Sask. Ag. And Food Forage Production Guide for the calculations on seeding rates.

$$\textbf{lbs/acre} = \frac{\textbf{43560 linear feet/ac x 30 seeds/linear foot}}{\textbf{105,000 seeds/lbs}}$$

$$= \textbf{13 lbs/acre}$$

$$\textbf{lbs/acre} = \frac{\textbf{87,120 linear feet/ac x 15 seeds/linear foot}}{\textbf{105,000 seeds/lbs}}$$

$$= \textbf{12.5 lbs/acre}$$

Annual ryegrass cultivars can also be Tretraploids and diploid types. The Tretraploids produce larger seed than the diploid types and therefore require a higher seeding rate. However, if the number of seeds per pound is known then the seeding rate can be easily determined by using the equation above. It is suggested that producers increase the seeding rates 5-10% if broadcast seeding. In addition, the general recommendation for irrigation is that the area to be sown be watered immediately after seeding to ensure quick forage establishment.

Annual ryegrass is very non-competitive for the first month after seeding. Therefore, weed control is critical. There are very few herbicides that can be used in crop and still allow the forage to be grazed. MCP Amine, Ester or K and Na salts can be used, but you must allow 7 days after application before using the forage as a feed source. Assert 300 is registered for use on annual ryegrass crops, but the forage cannot be used as a feed source in the year of application. For an up to date list of available herbicides refer to the 2002 Crop Protection Guide.

As mentioned, annual ryegrass requires fertility regimes similar to cereal crops. However, the Western Forage Beef Group recommends that a follow up application of nitrogen be applied after each harvest to stimulate regrowth. The general recommendation is that you apply 30 – 40 lbs/acre actual N on dryland or 40 – 50 lbs/acre actual N under irrigation after harvesting for silage, hay or grazing. However, every prudent forage producer will conduct a proper soil test before seeding to determine proper fertility requirements of the crop. Each producer should keep in mind that they are responsible for conducting forage quality assessment on their forage before it is utilized as a feedstuff.

Annual ryegrass utilization can begin when the plants reach a height of 8 to 10 inches. The annual ryegrasses can generally tolerate utilization of 70% on each grazing event. Allow 3 – 5 weeks between grazing events. However, in order to prevent seed production, the westerwolds annual ryegrasses should not be allowed to produce heads. Westerwolds annual ryegrass is induced to flower by exposure to long daylight periods and only requires 11 hours continuous daylight to flower (Western Forage Beef Group - Pasture School 2001).

In annual ryegrass forage trials conducted at Melfort by the Saskatchewan Forage Council (SFC) from 1998 to 2000, Italian ryegrass yields averaged 8000 lbs/acre when combined over two harvesting operations (Table #1). Italian ryegrass trials were also conducted at Canora over the same period, but the trials failed to produce consistent results due to excessive rainfall in 1998, poor weed control in 1999 and lack of moisture in 2001.

Table#1.

Italian Ryegrass Mean Yield at Melfort from 1998 to 2000 (lbs/acre)				
Variety	Cut#1	Cut#2	Total Yield	% Maris Ledger
Maris Ledger	6000	2100	8200	100
Meribel	4800	2200	7100	86
Bartali	5500	2400	7800	96
Barrextra	6500	2300	8700	106
Lemtal	5900	2300	8200	100
Mean	5800	2200	8000	
Sask. Forage Council Variety Trials – funding provided by ADF				

Westerwolds ryegrass yields were on average 2000 lbs/acre higher than the Italian ryegrass at the same location (Table #2). However, the average westerwolds yields obtained at Canora were only 60% of the average yields obtained at Melfort for the same period (Table #3). The annual ryegrass trials at Canora were harder to establish due to volunteer crop competition and a high weed population. This emphasizes the statement made earlier about using clean land for establishment of annual ryegrass and adopting good weed control practices. The Melfort site had a comparatively high weed population, however, unlike the Canora site which is relatively close to the town of Canora and other research trials, herbicide drift out of the target area was not a concern at the Melfort site and weed control was much more effective. This is largely reflected in the higher biomass yields obtained at Melfort. Moisture levels were similar within years and would account for some of the variation in yield but certainly not all.

As an aside: I am of the opinion that perhaps weed control in perennial forage crops is not as critical as we might think when we compare it to something like annual ryegrass. When utilizing a forage such as annual ryegrass, most producers are relying and expecting a high productive forage for that year. Most producer will manage their cow herd accordingly. Therefore, weed control is critical for the producers to truly reach the full potential of the annual ryegrass crop. On the other hand, if there are annual weeds in a newly seeded perennial forage stand, we need not be overly concerned, for next year they will not be there. Very often cultural control practices can be used to suppress the weed population in the establishment year. You cannot continually mow an annual ryegrass stand to suppress weeds if you intend to get some production for your efforts.

Table #2

Westerwolds Ryegrass Mean Yield at Melfort from 1998 to 2000 (lbs/acre)				
Variety	Cut#1	Cut#2	Total Yield	% Aubade
Agraco	5900	2300	8800	88
Barspectra	5700	2700	8400	84
SW WWR9016	7000	2800	9800	98
Barwoltra	6700	2600	9300	93
*Aubade	6000	4000	10,000	100
Mean	6300	3000	9300	

Sask. Forage Council Variety Trials – funding provided by ADF
*Note: Only two years of data (1999 and 2000).

Table #3

Westerwolds Ryegrass Yield at Canora from 1998 to 2000 (lbs/acre)				
Variety	Cut#1	Cut#2	Total Yield	% Aubade
Agraco	4400	1300	5700	93
Barspectra	4600	1100	5700	93
SW WWR9016	3800	1300	5100	83
Barwoltra	4000	1100	5100	83
*Aubade	4900	1100	6100	100
Mean	4300	1200	5500	

Sask. Forage Council Variety Trials – funding provided by ADF
*Note: Only two years of data (1999 and 2000).

Dr. Bruce Coulman and colleagues at Agriculture and Agri-Food Canada - Saskatoon conducted annual ryegrass trials at the Melfort research station from 1996 to 1998 and looked at the effect that companion crop had on the subsequent forage yields (Tables 4 and 5). The treatments were: No companion crop, wheat sown at 70 or 35 lbs/acre and barley sown at 60 or 30 lbs/acre. The no cover crop treatment was harvested in August of each year and once again in October of each year. The cover crops were harvested for seed each year and the annual ryegrass regrowth was measured in October of each year. The average yields of the Italian and Westerwolds without companion crop were 10,700 lbs/acre over the three years of the trials (Table 4 and 5). The range in forage yield without a companion crop was a low of 6000 lbs/acre in 1998 to a high of 16,000 lbs/acre in 1996 (Data not shown).The Italian and Westerwolds regrew similarly after the companion crops were removed for seed in the fall. The Westerwolds regrowth yields after seed harvest of the companion crop were 1400, 1800, 1500 and 2000 lbs/acre for the 70, 35, 60 and 30 lbs/acre seeding rates respectively, when averaged over all cultivars and years (Table #4). The yield of Westerwolds yields ranged form 300 lbs/acre in 1998, for the higher seeding rates to 3320 lbs/acre in 1997, for the lower seeding rate of the companion crop (Data not shown).

The yields of the Italian ryegrass were 1600, 2600, 1600 and 2500 lbs/acre for 70, 35, 60, and 30 lbs/acre seeding of the companion crop, when averaged over all cultivars and years (Table #5). The range in Italian ryegrass regrowth was 100 lbs/acre for the higher seeding rates to 3400 lbs/acre for the lower seeding rates (Data not shown).

Table #4.

Mean Yield of Westerwolds ryegrass at Melfort Research Station from 1996 to 1998			
	Fall Yield (lbs/acre)	% No companion	Total Yield (lbs/acre)
No Companion Crop	**4000**	**100**	**10,700**
Wheat – 70 lbs/acre	**1400**	**34**	**1400**
Wheat – 35 lbs/acre	**1800**	**46**	**1800**
Barley – 60 lbs/acre	**1500**	**37**	**1500**
Barley – 30 lbs/acre	**2000**	**50**	**2000**
Dr. Bruce Coulman – Agriculture and Agri-Food Canada – Saskatoon Research Centre			

Table #5.

Mean Yield of Italian ryegrass at Melfort Research Station from 1996 to 1998			
	Fall Yield (lbs/acre)	% No companion	Total Yield (lbs/acre)
No Companion Crop	**5000**	**100**	**10,700**
Wheat – 70 lbs/acre	**1600**	**32**	**1600**
Wheat – 35 lbs/acre	**2600**	**53**	**2600**
Barley – 60 lbs/acre	**1600**	**32**	**1600**
Barley – 30 lbs/acre	**2500**	**50**	**2500**
Dr. Bruce Coulman – Agriculture and Agri-Food Canada – Saskatoon Research Centre			

In general, annual ryegrass is a highly productive forage grass in most years when sown in the Black/Grey wooded climatic zones, or under irrigation. A prudent producer will consider the cost of seeding annual forages each year compared to establishment of a perennial forage crop. However, not ever producer is in a position to utilize perennial forage in their farming operation. Annual ryegrass fits well into an annual cropping system and has high forage quality that could be utilized by livestock producers under grazing situations. Because Annual ryegrass is an annual and only lives for one season, it is attractive to grain producers that want to increase their options and the diversity of their farming operation. "It easy for grain producers to seed it one year and be rid of the next; provided seed production is prevented". If using a companion crop, seed early to facilitate early removal and to maximize annual ryegrass regrowth after companion crop removal. Annual ryegrass stays green well into the fall and throughout the winter under snow (personal observation). Annual ryegrass can be used to extend the grazing season beyond the normal grazing period or may be utilized as stockpiled forage.

For more information, contact Randy Pastl, Research Project Manager – Saskatchewan Forage Council (ph: 306-966-8663). The Author wishes to thank Dr. Bruce Coulman – Agriculture and Agri-Food Canada – Saskatoon, Sk.; Dr. Duane McCartney – Agriculture and Agri-food Canada – Lacombe, AB.; Western Forage Beef Group; Michel Tremblay – Sask. Ag. And Food – Regina, SK for much of the information presented in the article.